

KI-261-1 R66-series Cargo Hook (RH) Door Installation Kit Instructions

“AUX PWR” circuit breaker must be 10 amp (P/N B297-10, not included in kit); replace as required.

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-261Instr.	Kit Instructions	1
2	B158-8-2	Heat Shrink – 1/2 inch diameter (2 inches long)	2
3	B260-2	Terminal – ring	1
4	B263-2	Socket	3
5	B263-33	Housing	1
6	B266-4-36	Sleeving – Expandable (36 inches long).	1
7	D098-6	Tab	4
8	G140-9	Harness Assembly	1
9	G142-2A	Cargo Hook Door – RH Includes: [1] D573-4 Rod [1] D575-2 Ball Joint [1] D575-3 Ball Joint [1] D580-6 Fan Assembly [1] F227-2 Hinge Assembly, RH Lower (not installed) [1] F227-4 Hinge Assembly, RH Upper (not installed) [1] F654-46 Decal	1
10	G145-4	Angle	1
11	G142-4A	Wire Sub-Assembly – RH Door Fan (power) Includes: [1] B274-18 wire, 6.5-foot length (marked “-2879”) [1] B274-22 wire, 8-foot length (marked “-2880”) [1] D262-10 Fuse Holder	1
12	G142-4B	Wire Sub-Assembly – RH Door Fan (ground) Includes: [1] B260-3 Terminal [1] B274-22 wire, 8-foot length (marked “-2881”)	1
13	D275-201	Fuse	1
14	AN526C832R9	Screw	1
15	MS3367-4-9+	Ty-Rap (Note: “+” in contents part number indicates 20-qty pack)	1
16	MS3367-5-9+	Ty-Rap (Note: “+” in contents part number indicates 20-qty pack)	1
17	MS3367-7-9+	Ty-Rap (Note: “+” in contents part number indicates 10-qty pack)	1
18	MS35489-4	Grommet	2
19	MS51861-37C	Screw	4

Special Tools

- Drilling and deburring tools.
- 90° offset Phillips screwdriver, minimum 8-inch length.
- Wire insulation stripper.
- Pin/socket and ring terminal crimpers.
- Heat gun.

Kit Instructions**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.

1. Ensure BATTERY switch is off. Pull all circuit breakers. Disconnect battery per R66 Maintenance Manual (MM) § 96-11 A (lead-acid) or § 96-12 B (lithium-ion). Open circuit breaker panel.

NOTE

Remove auxiliary fuel tank per MM § 28-51, if installed, to access battery.

2. Remove RH forward door per MM § 52-10.
3. Refer to Illustrated Parts Catalog (IPC) Figure 6-1. Remove F445-1 cover assembly.
4. Remove F444-1 cyclic box cover per MM § 67-11 A. 2.
5. Refer to IPC Figure 97-1. Remove avionic equipment from avionics tray(s) immediately forward of cyclic friction knob. Remove right- and left-hand S1413 hole plugs. Remove hardware securing avionics tray(s) using 90° 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 tunnel area.
6. Remove F469-2 RH carpet assembly per MM § 25-30. Remove 2451 plug (ref. IPC Figure 25-15).

CAUTION

When drilling holes, maintain 90° angle to floor and F090-2 frame to avoid damaging adjacent structures. Use of a drill stop is recommended.

7. Refer to Figure 1. Install G145-4 angle, D098-6 tab, and G140-9 harness assembly as shown, replacing existing screw with AN526C832R9 screw and securing harness assembly wire in C238 jamb. Install a second D098-6 tab below first as shown, using existing hardware.
8. Refer to Figure 2. Locate and drill 0.313-inch (5/16-inch) hole thru F090-2 frame (ref. IPC Figure 52-17), and 0.313-inch hole thru floor. Deburr holes and clean up debris. Install MS35489-4 grommet in each hole.
9. Position G142-4A wire sub-assembly at location shown, ensuring wire -2879 is routed towards F293-2 panel. Secure D262-10 fuse holder to A780-70 cable using (2) MS3367-5-9 ty-raps. Cinch ty-raps until snug without overtightening and trim tips flush with heads.

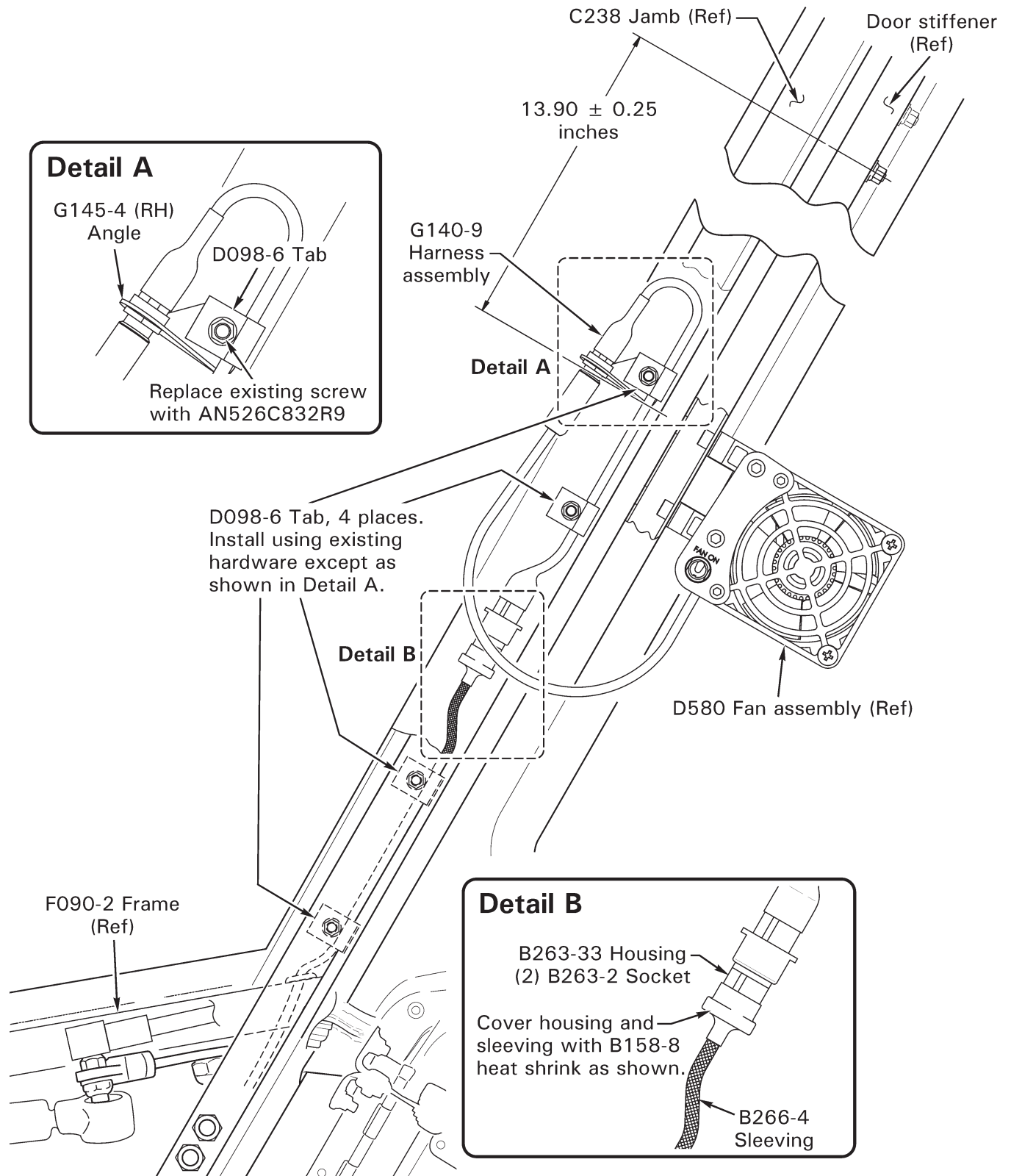


FIGURE 1
(view looking outboard, RH side)

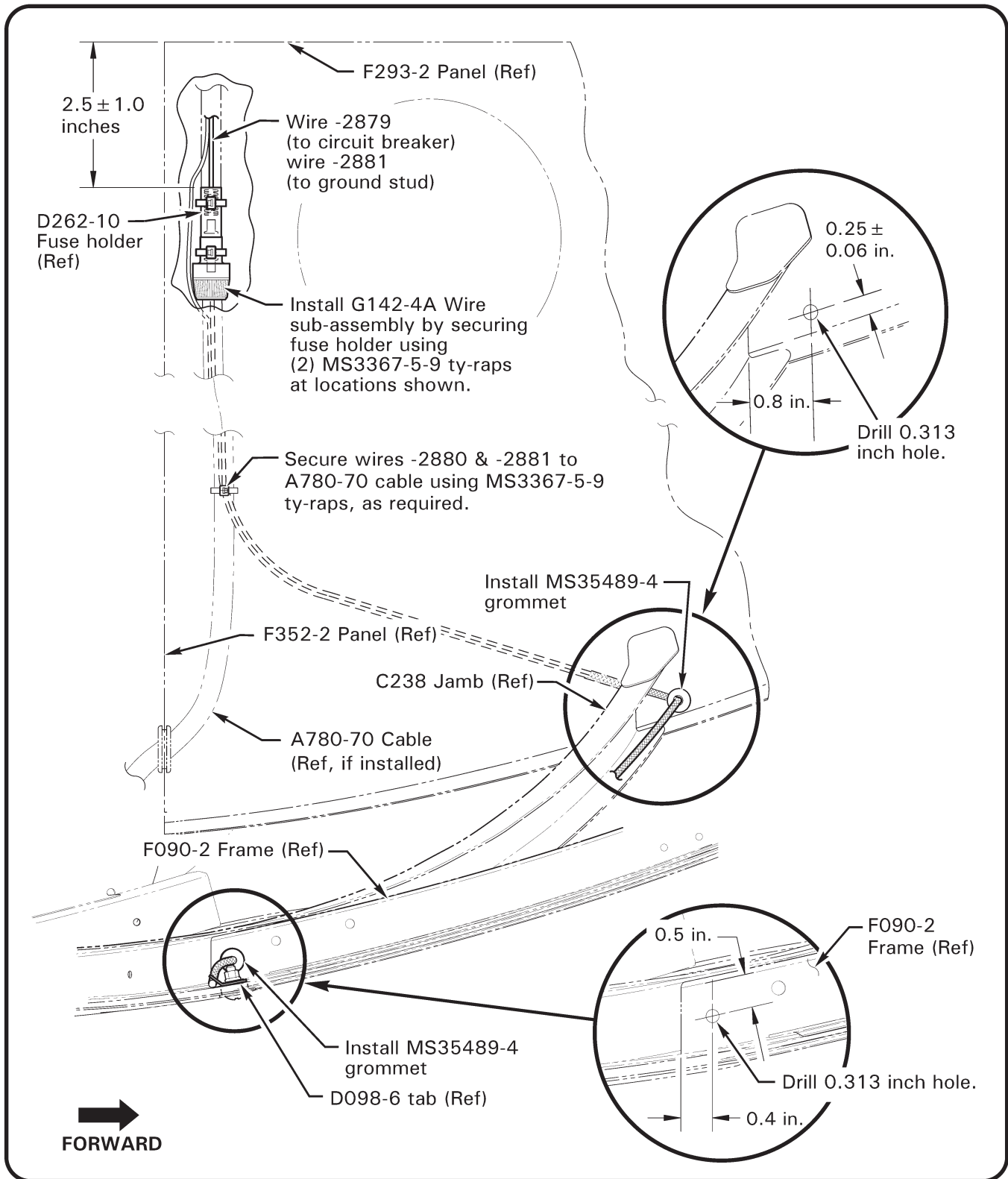


FIGURE 2
(view looking down)

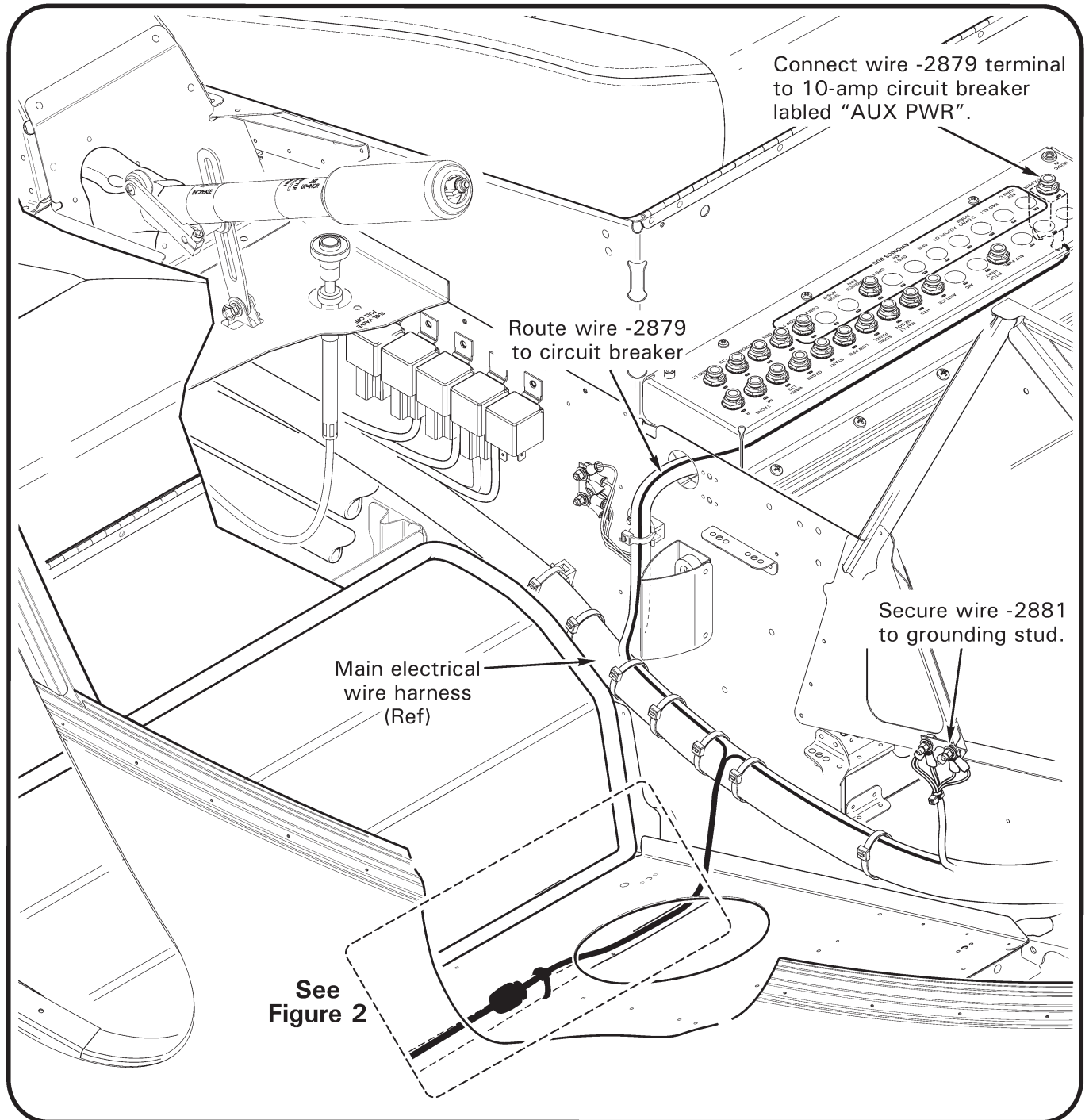


FIGURE 3
(view looking aft)

Kit Instructions (continued)

10. Route wire -2879 under F293-2 panel & heater hose, across tunnel to main electrical wire harness, then aft along main harness, into circuit breaker panel to AUX PWR circuit breaker. Secure wire -2879 to main wire harness using MS3367-7-9 ty-raps as required. Cinch ty-raps until snug without overtightening and trim tips flush with heads. Cut wire -2879 to length (adding 1 inch for slack); strip end and crimp on B260-2 terminal. Inspect crimp per MM § 20-94 and verify security of terminal. Connect terminal to AUX PWR circuit breaker tab opposite bus bar connection; verify security.
11. Refer to Figure 3. On G142-4B wire sub-assembly (wire -2881), connect B260-3 terminal to grounding stud on panel forward of cyclic box using existing nut. Route wire -2881 aft along main harness, across tunnel, under heater hose and F293-2 panel, following wire -2879 to fuse holder. Secure wires using MS3367-5-9 or MS3367-7-9 ty-raps as required. Cinch ty-raps until snug without overtightening and trim tips flush with heads. Verify wires are secure and clear of flight controls.
12. Refer to Figure 2. Route wire -2881 past D262-10 fuse holder and adjacent wire -2880 (from fuse holder) outboard and forward, up through MS35489-4 grommet in floor. Secure wires to A780-70 cable (if installed) using MS3367-5-9 ty-raps as required. Verify wires are secure and have sufficient slack to droop slightly beneath floor.

NOTE

If A780-70 cable is not installed, secure wires -2881 and -2880 to NAV light and hourmeter wires using MS3367-4-9 ty-raps as required, then route diagonally beneath floor to grommet.

13. Route wires -2881 & -2880 inside C238 jamb and up through MS35489-4 grommet in F090-2 frame. Slide B266-4 sleeving down over wires and through both grommets.
14. Refer to Figure 1. Install third D098-6 tab just above F090-2 frame using existing hardware. Install fourth D098-6 tab (above) in C238 jamb using existing hardware and securing sleeve-covered wires. Verify sleeve-covered wires are not pinched and are held securely in C238 jamb.
15. Refer to Figures 1 & 4. Cut wires -2881 & -2880 and B266-4 sleeving to length. Strip wire ends and crimp a B263-2 socket on each wire. Inspect crimp per MM § 20-94 and verify security of socket. Install wire -2880 socket in location 1 and wire -2881 socket in location 2 of B263-33 housing. Verify security.
16. Cut B158-8-2 heat shrink to appropriate length to cover B263-33 housing and capture 1/4-inch end of sleeving. Slide heat shrink over housing and sleeving then activate with heat gun; verify housing and sleeving are covered with heat shrink. Connect B263-33 housing to G140-9 harness assembly; verify security.
17. Refer to Figures 1 & 2. Verify newly installed wiring is secure without preload or pinched wires. Move flight controls through full travel and verify clearance. Install D275-201 fuse in D262-10 fuse holder.
18. Fit G142-2A RH cargo hook door to helicopter and install F227-2 & F227-4 hinge assemblies per MM §52-10 C. Install door per §52-10 and connect D580 door fan to G140-9 harness.
19. Install 2451 plug. Install F469-2 RH carpet assembly per MM § 25-30.
20. Refer to IPC Figure 97-1. Install avionic tray(s) using 90° offset Phillips screwdriver and a 7/32-inch deep socket. Install equipment removed from avionics tray(s).

Kit Instructions (continued)

- 21. Install F444-1 cyclic box cover per MM § 67-11 B. 12. & 13.
- 22. Refer to IPC Figure 6-1. Install F445-1 cover assembly.
- 23. Secure circuit breaker panel. Ensure BATTERY switch is off.

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.

- 24. Connect battery per MM § 96-11 B (lead-acid) or § 96-12 C (lithium-ion). Push in all circuit breakers. Turn BATTERY switch on.
- 25. Function test D580 door fan by toggling switch to FAN ON position.
- 26. Ensure R66 Pilot’s Operating Handbook (POH) Section 9 includes Cargo Hook Equipment Supplement, downloadable from www.robinsonheli.com. Revise helicopter’s Weight and Balance Record in POH Section 6 to reflect this installation by incorporating the following data:

Subtract:

Item	Weight	Long. Arm	Long. Moment	Lat. Arm	Lat. Moment
Original door (RH)	Weigh door (lb)	49.5 in.	(Weight x Long. Arm)	26.80 in.	(Weight x Lat. Arm)

Add:

Item	Weight	Long. Arm	Long. Moment	Lat. Arm	Lat. Moment
G142-2 Cargo Hook Door (RH)	Weigh door (lb)	49.5 in.	(Weight x Long. Arm)	26.80 in.	(Weight x Lat. Arm)

- 27. Make appropriate maintenance record entries.

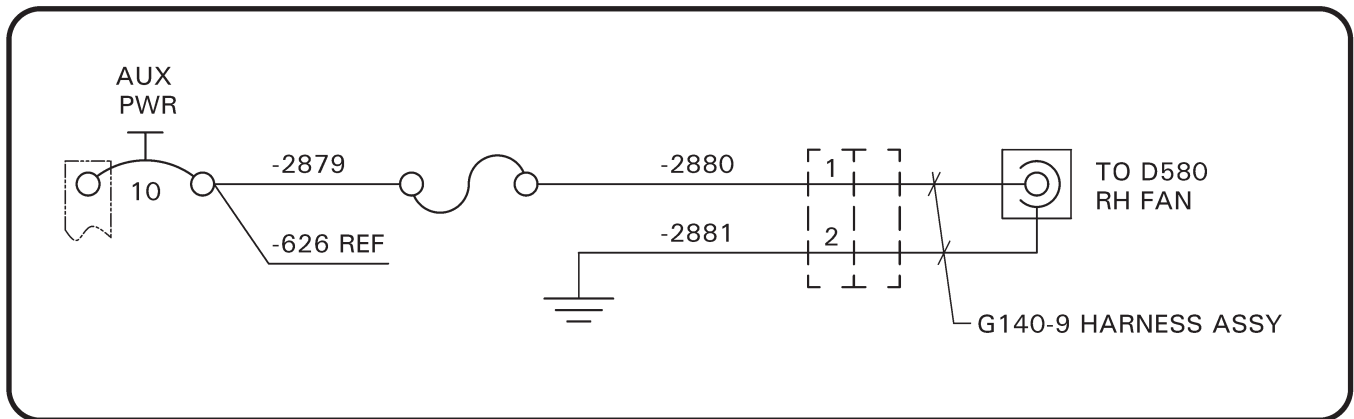


FIGURE 4