

R66 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-261-1Instr.	Kit Instructions	1
2	B158-8-2	Heat Shrink – 1/2 inch diameter (2 inches long)	2
3	B260-11	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

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.

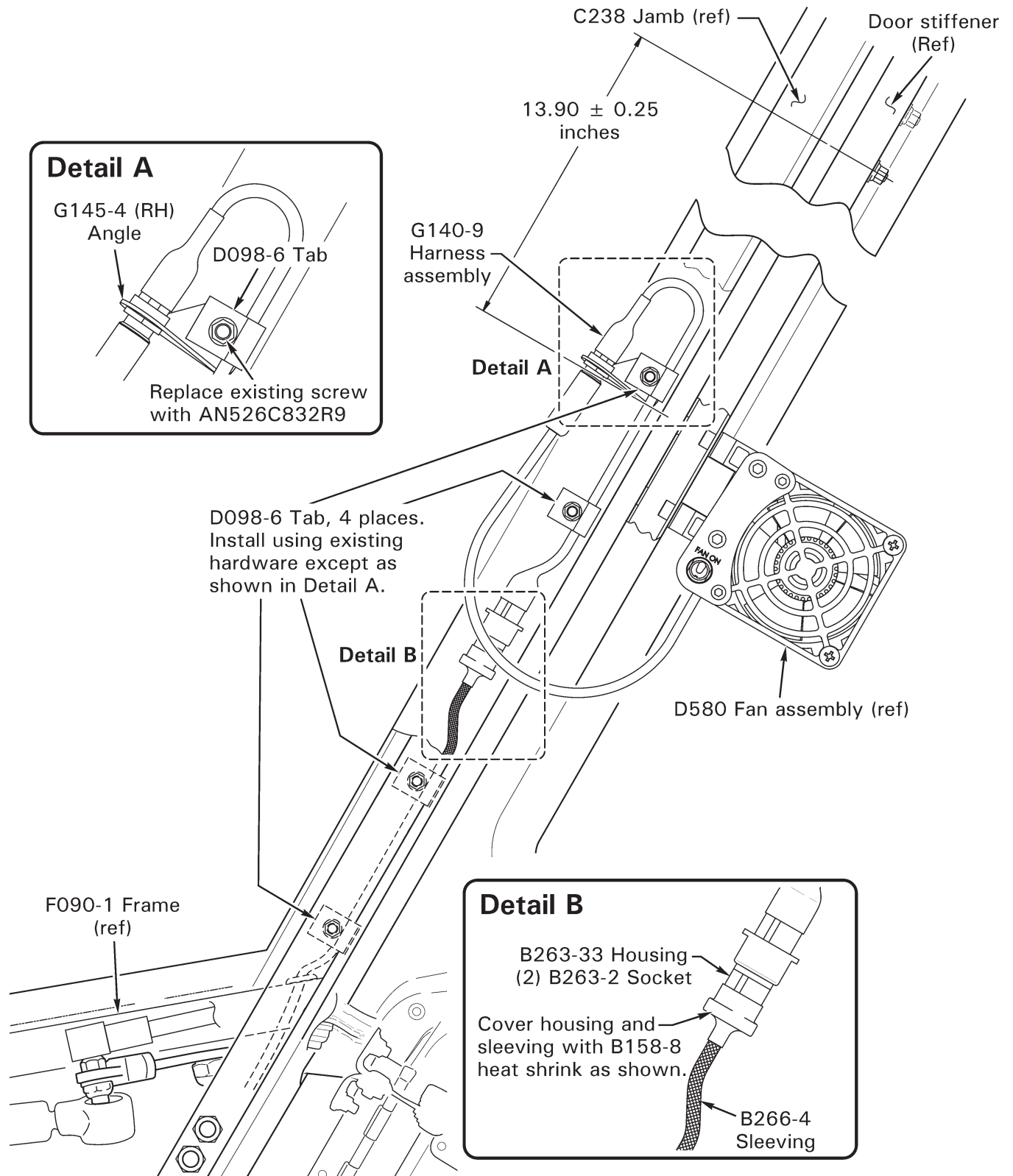


FIGURE 1
(view looking outboard, RH side)

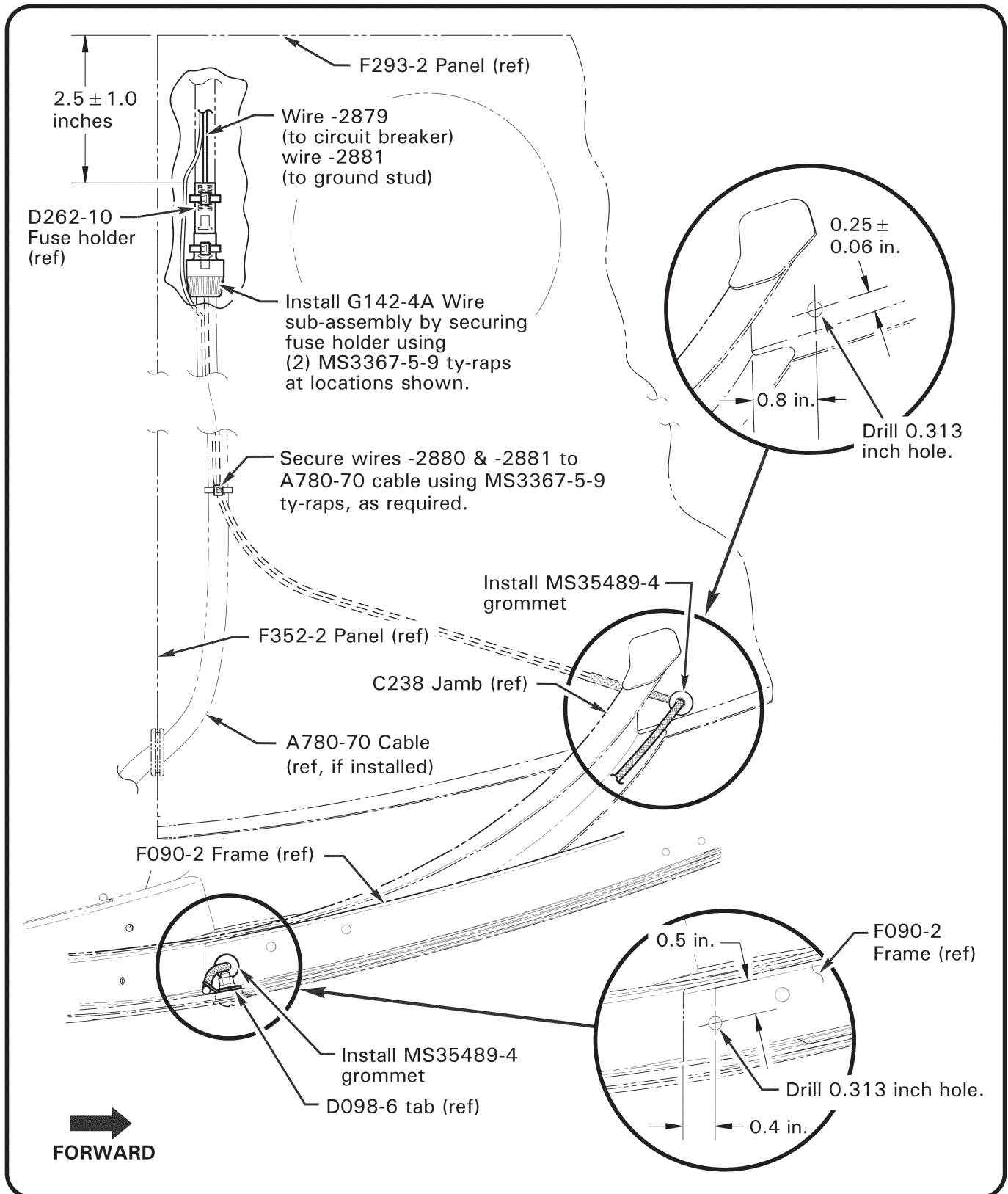


FIGURE 2
(view looking down)

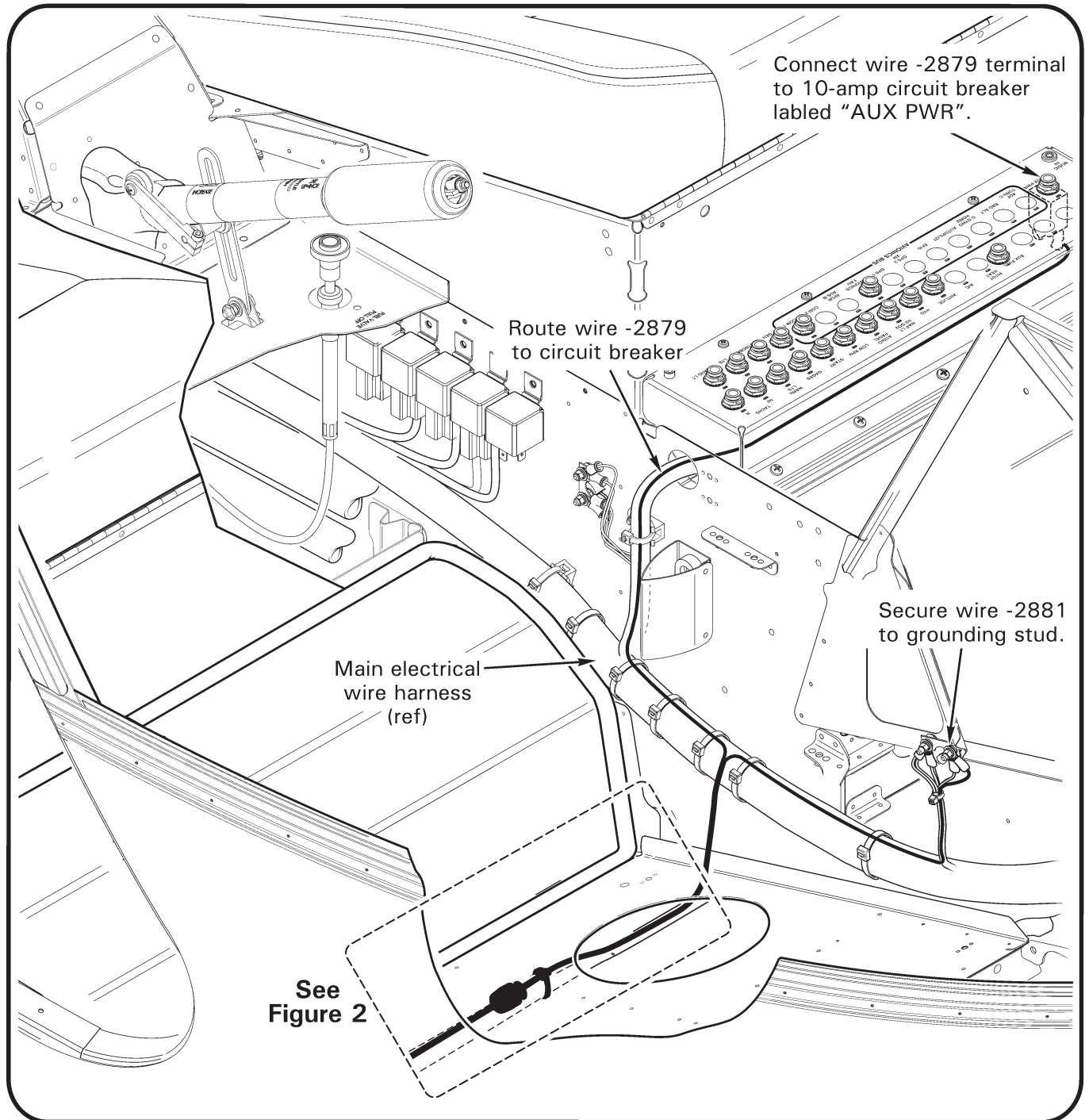


FIGURE 3
(view looking aft)

Kit Instructions (continued)**NOTE**

Parenthetic dash numbers, such as (-2879), indicate number marked on wiring insulation (if single conductor), or jacket (if multi-conductor and/or shielded).

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 B260-11 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.

Kit Instructions (continued)

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).
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.
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.

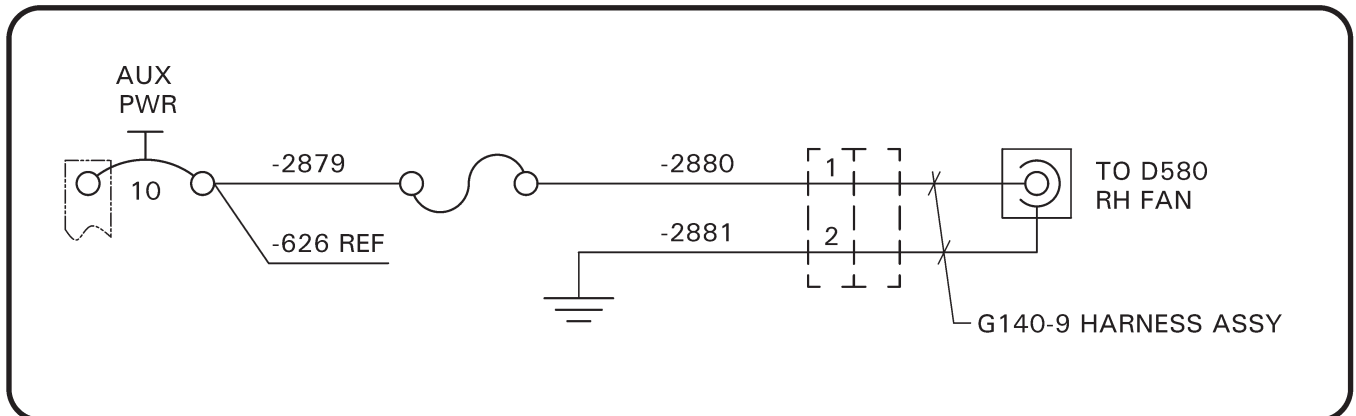


FIGURE 4