

R44-series A/C Duct Retrofit & Ground Wire Installation Kit Instructions

Applicable to R44 II S/N 14411 & prior, and Cadet S/N 30070 & prior, equipped with D796-1 air conditioning duct assembly. KI-278-1 installs D796-2 air conditioning duct, and adds ground wire to airframe harness. KI-278-2 installs ground wire only, and is required to be installed with KI-275-4 in helicopter serial number ranges noted above.

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.

NOTE

Kit requires separating cabin interior pieces from bulkhead and roof, which may result in deterioration of the foam insulation. Kit does not contain replacement interior parts.

ITEM	PART NUMBER	KIT CONTENTS	QTY PER KI-278-1	QTY PER KI-278-2
1	KI-278Instr.	Kit Instructions	1	1
2	B158-10-.75IN	Heat Shrink – Black, 5/8-inch diameter (3/4-inch length, labeled “BLK PLUG”).	1	1
3	B260-3	Terminal – Ring	1	1
4	B263-2	Socket	1	1
5	B263-33	Housing – 2-Socket (black)	1	1
6	D796-2	A/C Duct Assembly	1	0
7	KI-278-2367	Wire Assembly (ground) Includes: [1] B274-22 Wire, 22 gage, 80-inch length (marked “-2367 KI-278”) [1] B260-3 Terminal – Ring	1	1
8	MS3367-4-0+	Ty-rap (Note: “+” in part number indicates 10-qty pack)	1	1
9	MS3367-5-9+	Ty-rap (Note: “+” in part number indicates 20-qty pack)	1	1

Special Tools:

- Wire stripping and crimping tools
- Pin insertion/extraction tool
- Small diameter (≈3/32-inch), 3-foot long rigid metal rod, such as a welding rod
- B270-8 Adhesive

Kit Instructions

1. Turn BATTERY switch off. Disconnect battery per R44 Maintenance Manual (MM) § 37-10.
2. Remove RH aft seat back assembly per MM § 15.220.

Kit Instructions (continued)

3. Refer to R44 Illustrated Parts Catalog (IPC) Figure 21-31. Remove D796-1 duct assembly by removing screw immediately aft of rotor brake knob assembly. Slide duct forward and down to disengage tabs from evaporator box and windshield frame. Push rotor brake knob through slot in duct. Disconnect map light and air conditioning switch connectors. Remove duct.

NOTE

Parenthetic dash numbers, such as (-1804), indicate number marked on wiring insulation (if single conductor), or jacket (if multi-conductor and/or shielded).

4. Refer to Figure 1. Locate B263-15 (white, 3-socket) housing in airframe harness, containing wires (-1804), (-1805), and (1807). Slide B158-10-.75IN heat shrink over housing and apply heat.
5. Refer to Figures 1 & 2. Strip KI-278-2367 wire assembly end and crimp B263-2 socket on wire. Install socket in position 2 of B263-33 housing (position 1 remains vacant). Verify security of wire.
6. Position D796-2 duct assembly approximately, inside the helicopter. Locate B263-32 connector inside duct assembly and connect to newly installed B263-33 connector. Connect map light and air conditioning switch connectors to new duct assembly. Secure connectors underneath D797-9 strap as shown, using appropriately-sized ty-raps. Thread rotor brake knob assembly through bead-chain slot for installation. Install duct by simultaneously hooking forward end onto windshield frame and aft end into evaporator box then sliding duct aft to align screw hole. Ensure ty-raps and wiring are clear of rotor brake bead-chain and cable. Install MS27039C0807 screw; verify security.
7. Refer to Figure 3. Remove (4) MS27039C0805 screws securing evaporator to bulkhead, two at lower flange and two at RH flange. With installation screws removed, carefully pivot evaporator away from bulkhead, just enough to route wire of KI-278-2367 wire assembly as shown, clearing lower flange. Using a rigid metal rod carefully route upward behind bulkhead foam insulation on RH (seat back) side, along existing wire bundle to lower edge of evaporator. Secure wire assembly to rod and carefully retract rod downwards. Install (4) MS27039C0805 screws securing evaporator to bulkhead, ensuring (KI-278-2367) wire assembly is clear of flanges.
8. Locate ground stud on C351-2 RH aft seat back brace. Secure terminal of KI-278-2367 wire assembly to ground stud, using existing hardware.
9. Install insulation per MM § 15.400, as required.
10. Connect battery per MM § 37-10.
11. Turn on battery switch and verify proper installation, security, and operation of light and air conditioning switches. Verify proper rotor brake function. Turn off battery switch.
12. Install RH aft seat back assembly per MM § 15.220.
13. Make appropriate maintenance record entries. Weight and Balance change is negligible.

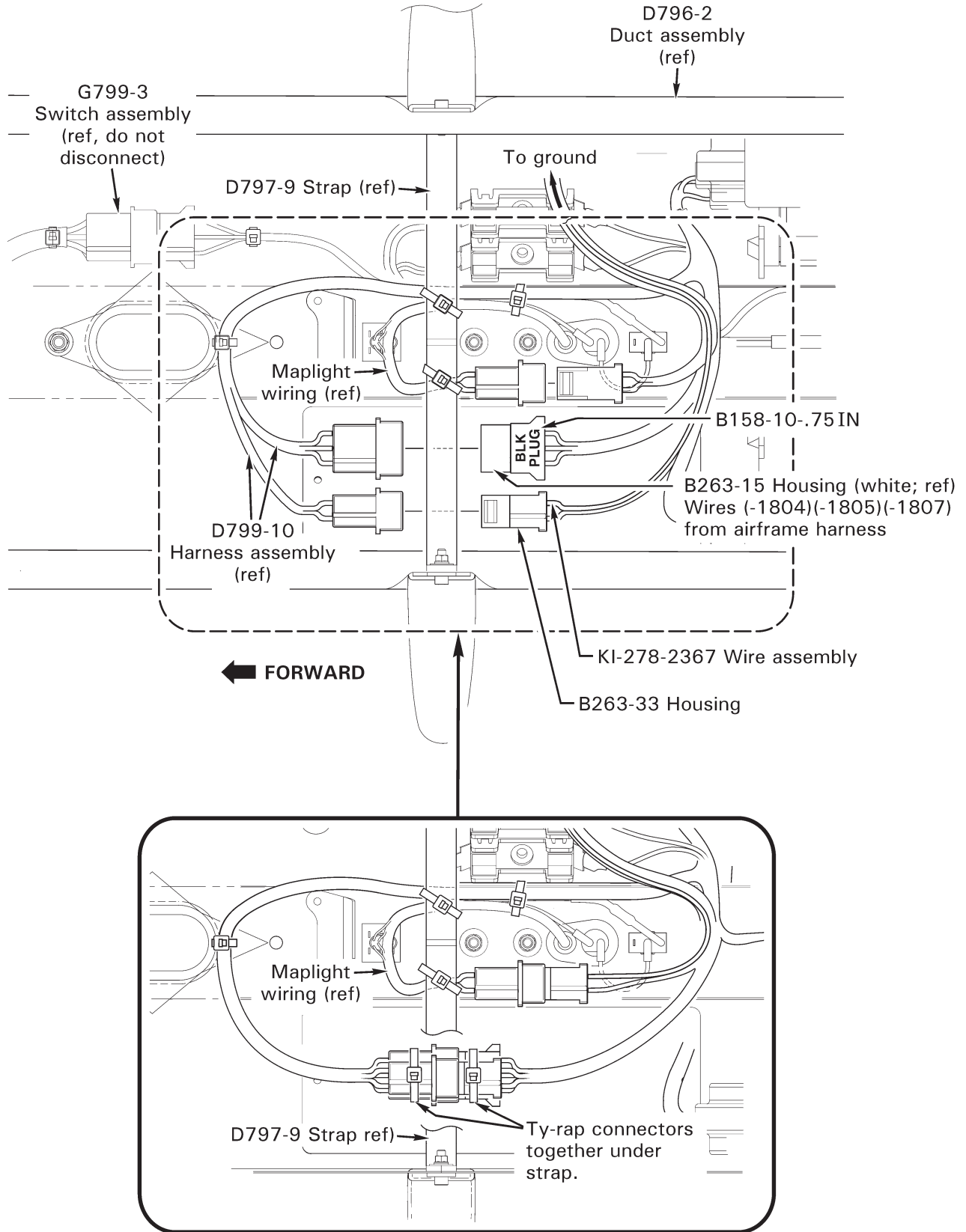


FIGURE 1 Installing D796-2 air conditioning duct

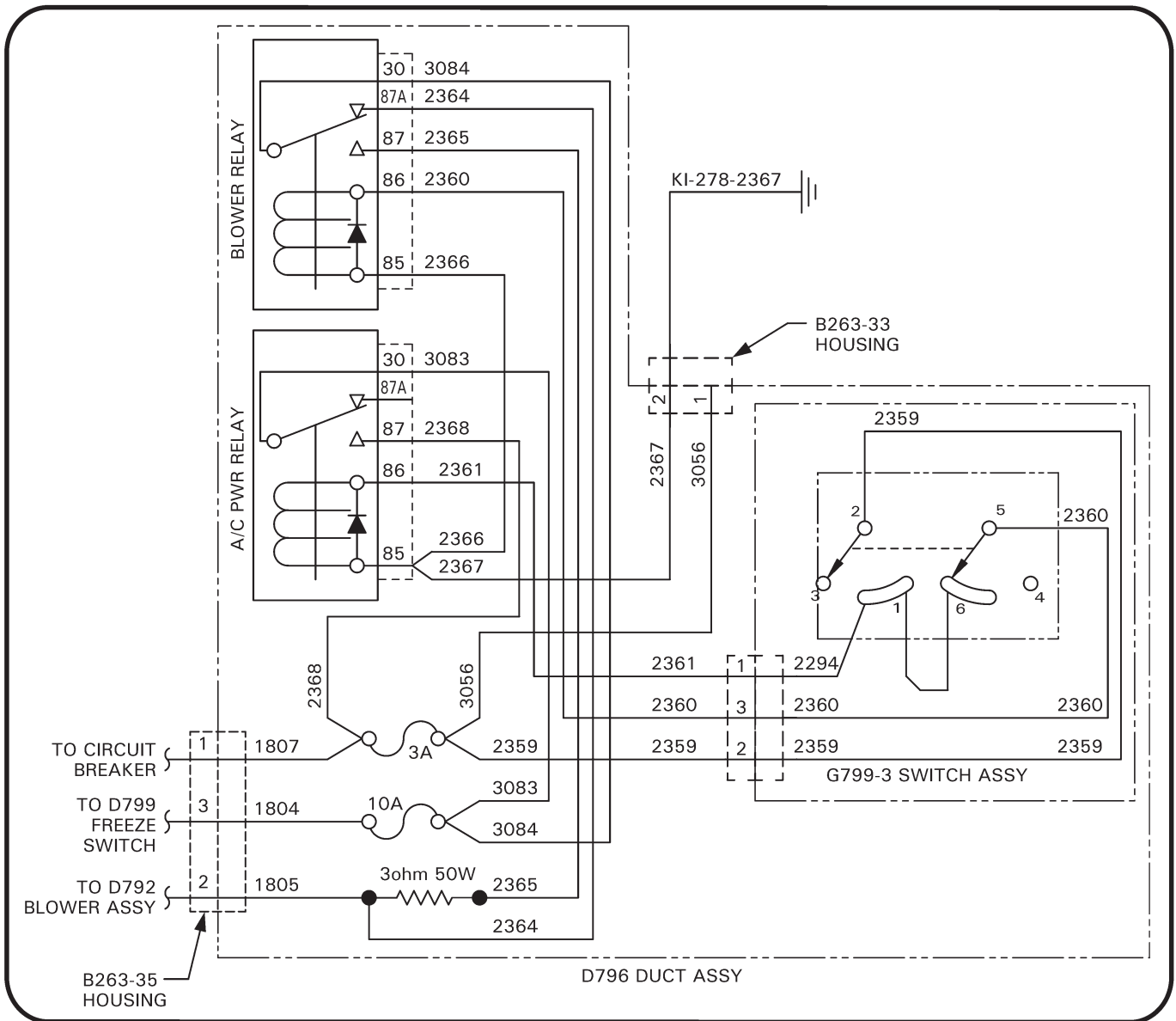


FIGURE 2 Wiring schematic

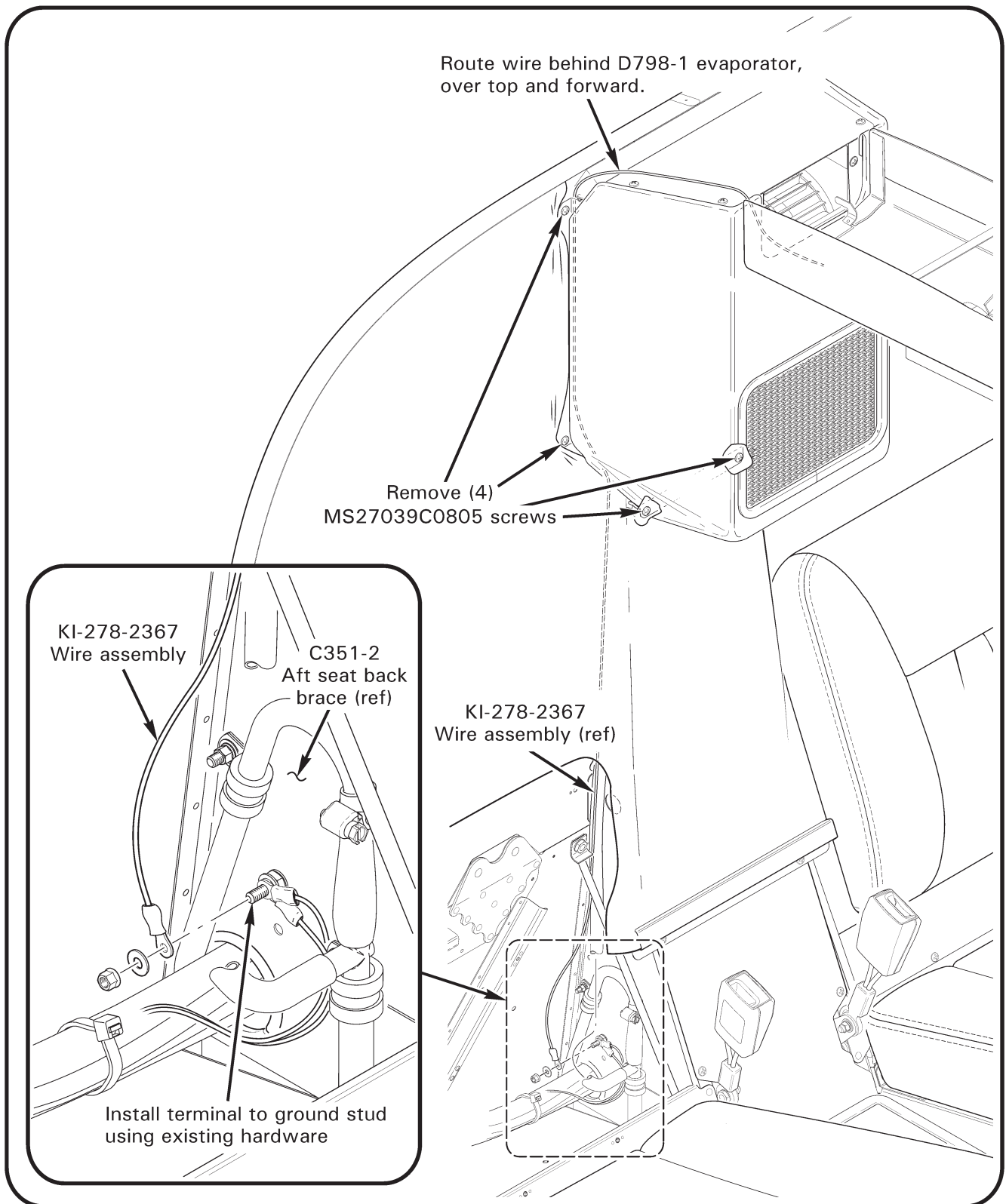


FIGURE 3 KI-278-2367 wire assembly installation
(view from helicopter RH side, looking aft)