

KI-179-6 & KI-179-8 R44-series Kannad AF Integra ELT Installation Kit Instructions
For R44 helicopters without ELTs or if replacing RHC-option Pointer 3000-10 or 4000-10 ELT.
KI-179-6 includes ELT transmitter; KI-179-8 is provisions only.

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

Rivets included in kit contents are provided as a courtesy and at lengths most commonly used on production helicopters. Proper rivet length is determined by installer during installation.

ITEM	PART NUMBER	KIT CONTENTS	QTY PER KI-179-6	QTY PER KI-179-8
1	KI-179-6 & -8Instr.	Kit Instructions	1	1
2	A225-1.1FT	Grommet (1-foot length)	1	1
3	A837-3	Backing Plate	1	1
4	A837-10	Harness Assembly ("dongle"- contains registration data)	1	1
5	B260-3	Terminal - Ring	1	1
6	B263-1	Pin	3	3
7	B263-2	Socket	3	3
8	B263-14	Housing (3-pin)	1	1
9	B263-15	Housing (3-socket)	1	1
10	B267-3	Terminator - Shield (heat-activated; 1 spare)	2	2
11	C837-5	Angle	1	1
12	D210-3	Nut	8	8
13	F654-25	Decal – "DO NOT PROGRAM..."	1	1
14	F837-3	Switch Assembly - ELT (remote)	1	1
15	F837-4	Doubler	1	1
16	KI-179-1B	Wire - Unshielded (B274-22 wire; 3 ft length, marked "692")	1	1
17	KI-179-1D	Wire - Three-conductor, shielded & jacketed (B274-322 wire; 15 ft length, marked "-1849/-1850/-1851")	1	1
18	KI-179-2A	Antenna Cable Includes: [1] B274-518 Cable – Coax, 50 ohm, 18 gage; 2.42 ft length [2] 5225395-6 Plug	1	1
19	AV-300	Antenna	1	1
20	S1840502-01	Mounting Bracket (Kannad)	1	1
21	S1851501-02	ELT Transmitter (Kannad AF Integra)	1	0

ITEM	PART NUMBER	KIT CONTENTS (continued)	QTY PER KI-179-6	QTY PER KI-179-8
22	MS20470AD3-4+	Rivet (Note: "+" in part number indicates 50-qty pack)	1	1
23	MS21919WDG16	Clamp	3	3
24	MS27039C1-07	Screw	3	3
25	MS27039C1-08	Screw	2	2
26	MS3367-5-9+	Ty-Rap (Note: "+" in part number indicates 20-qty pack)	2	2
27	MS3367-6-0	Ty-Rap	1	1
28	NAS1149F0316P+	Washer (Note: "+" in part number indicates 10-qty pack)	2	2

Consumables:

Refer to R44 Maintenance Manual (MM) § 1.400 for approved materials list.

- B270-1 Sealant
- B270-13 Sealant
- R8260 Touch-up paint kit (refer to helicopter Maintenance Record for paint codes)

Special Tools:

- Step drill, 7/8 inch diameter capability
- Wire stripping and crimping tools
- Heat gun

Kit Instructions

1. Refer to R44 Service Letter SL-44. Verify registration marking indicated on A837-10 (dongle) harness assembly label matches aircraft registration marking.
2. Remove belly panels, control tunnel covers, aft-right seat back, and tailcone cowling. Release cyclic friction, remove spring pin securing cyclic friction knob, remove knob, and install a ty-rap or pin thru shaft to retain spacers. Remove carburetor heat knob on aircraft with carburetor heat assist. Remove screws securing C444 or C443 cyclic box cover, lift cover, and disconnect wire from post light. Remove post light from cover.
3. If installed, remove existing: ELT, ELT remote switch, ELT mounting bracket & associated hardware, and ELT antenna & antenna doubler. Leave wiring connecting remote switch and ELT in aircraft, but heat shrink or otherwise insulate existing connector for remote switch to protect the power wire within. Appropriately secure both connectors.
4. Mask cyclic box area to prevent debris falling in.
5. Refer to Figures 1 & 2. If required, create or modify remote switch hole in C444 cyclic box cover per Figure 1. Clean up debris.

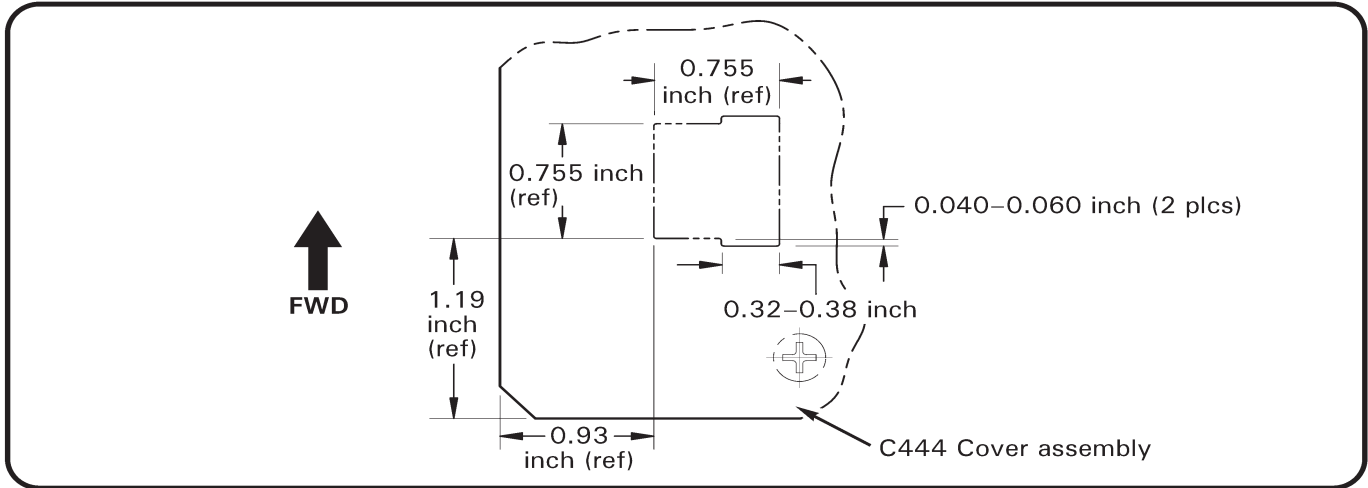


FIGURE 1

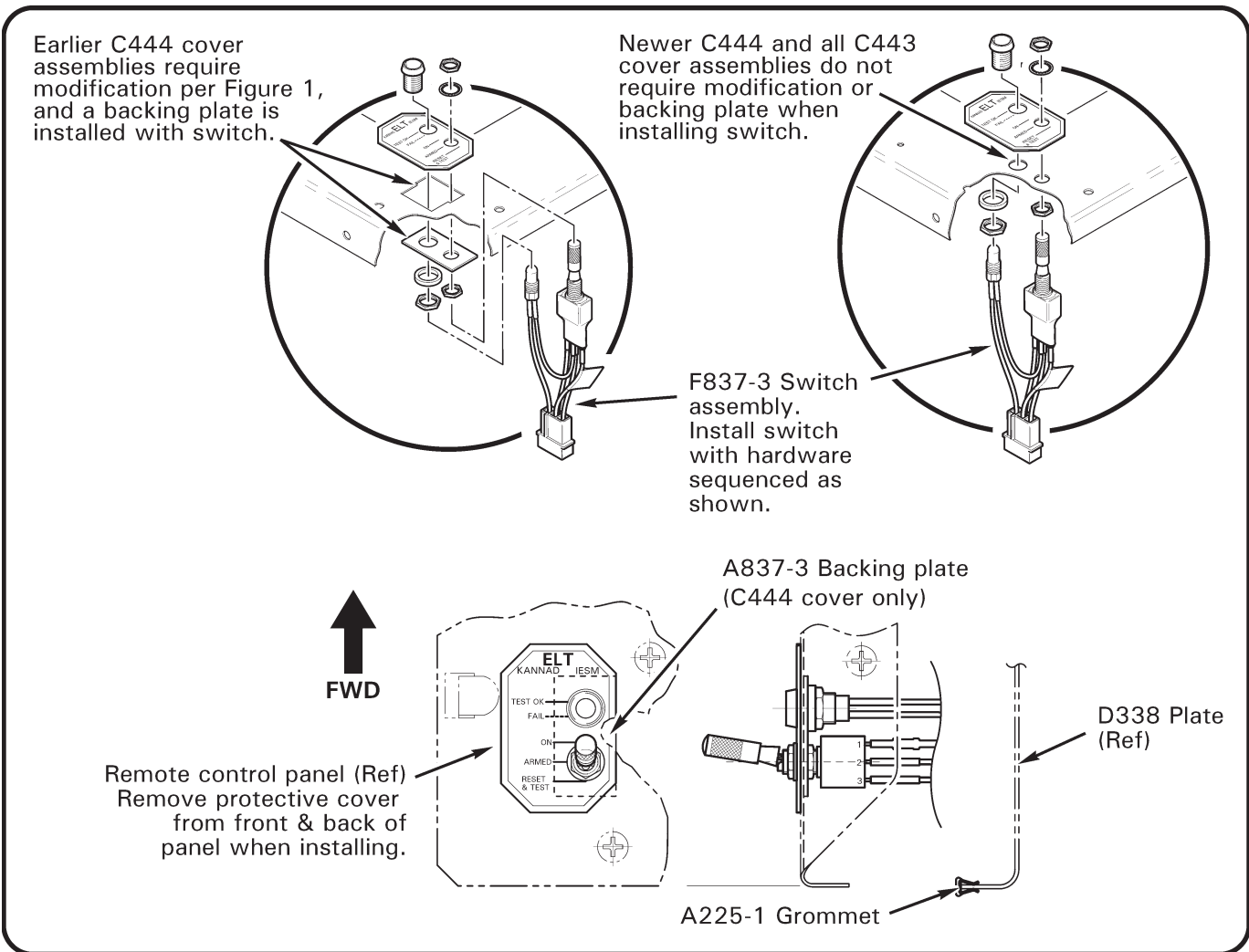


FIGURE 2

Kit Instructions (continued)**NOTE**

Hole dimensions must be accurate for proper switch installation. Newer C444 and all C443 cyclic box covers do not require modification.

6. Refer to Figure 2. Install F837-3 remote switch assembly into C444 or C443 cover with “RESET & TEST” position of switch AFT and secure with supplied hardware. Verify that momentary position of switch coincides with “RESET & TEST” position. Reinstall post light. Unmask cyclic box area. Install A225-1.1FT grommet, cut to an approximate length of 4.5 inches.
7. Refer to Figure 3. Install S1840502-01 ELT mounting bracket using C837-5 angle, clamps, and hardware. Affix F654-25 decal onto face of bracket per Figure 3, Detail A.
8. Determine if a three-conductor shielded & jacketed wire (continuously marked “1849/-1850/-1851”), or a four-conductor shielded & jacketed wire (continuously marked “1849-1852”, refer to following table for helicopter effectivity) for remote switch is pre-installed. If appropriately-marked wire is pre-installed, locate forward & aft ends, cut ty-raps as necessary to free them, and skip to step 11. If no shielded wire is installed, or if it cannot be located, proceed to step 9.

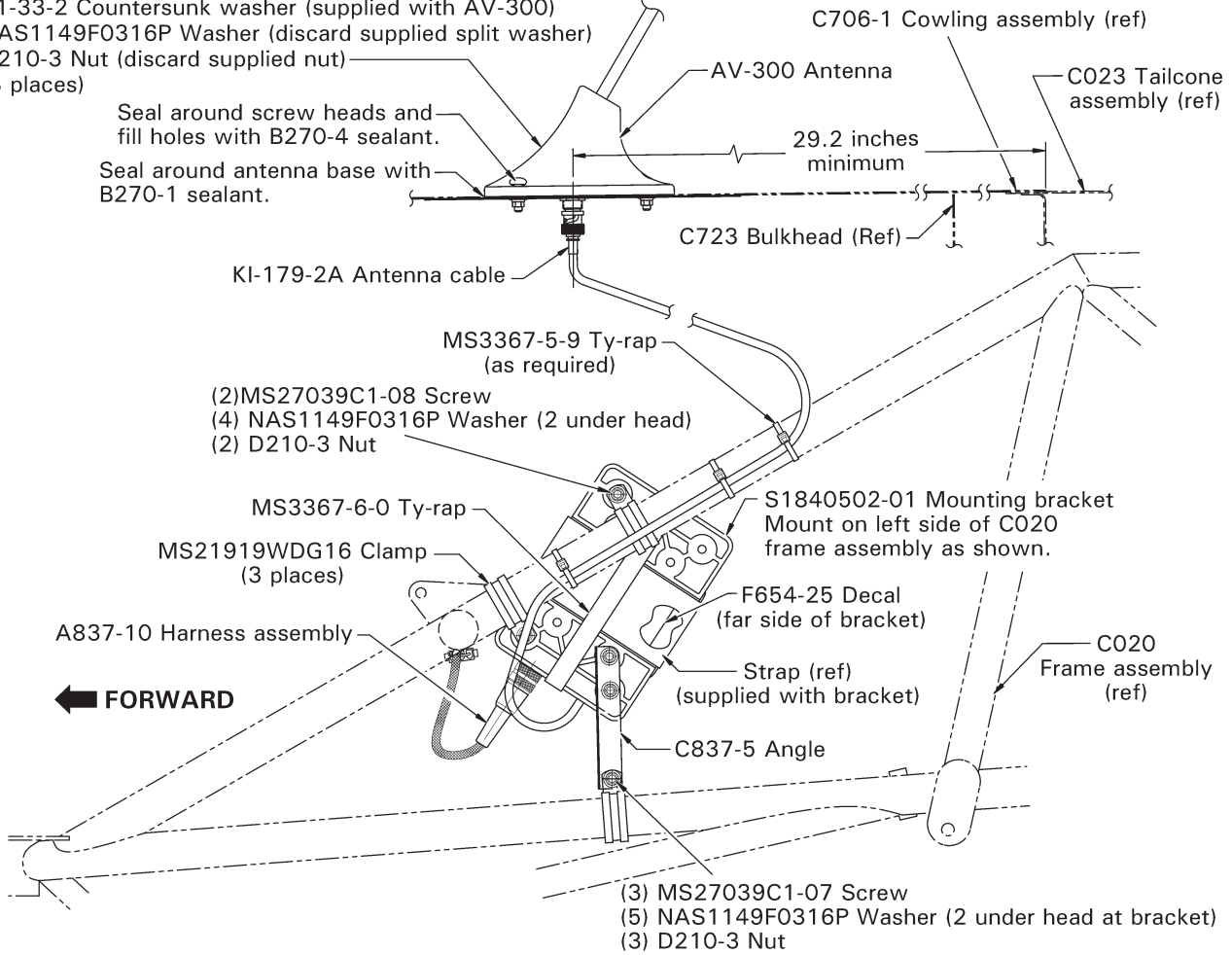
Aircraft with appropriately-marked three-conductor or four-conductor wiring pre-installed		
Model	Battery Location	Helicopter S/N
R44	Aft or Nose	1474 and subsequent
	Under Seat	1490 and subsequent
R44 II	Aft or Nose	10564 and subsequent
	Under Seat	10685 and subsequent

9. Locate main wire bundle passing through cabin aft bulkhead, behind right-aft seat back, and running forward through controls tunnel to instrument console. Run supplied KI-179-1D wire (marked “1849/-1850/-1851”) following this main wire bundle from ELT remote switch location in control tunnel, aft through tunnel, behind right-aft seat back, through cabin aft bulkhead, along upper frame, and across hydraulic reservoir support to ELT mounting bracket. Secure KI-179-1D wire to bundle using MS3367-5-9 ty-raps as required. Cinch ty-raps until snug without overtightening, and trim tips flush with heads. Trim wire leaving adequate slack for attachment of connector.
10. At forward end of three- or four-conductor shielded & jacketed wire, strip insulation from and crimp a B263-2 socket on each orange, blue, and white wire; if installed, cut green wire flush with shield. Strip insulation and crimp B260-3 terminal on one end of supplied KI-179-1B wire (marked “692”). Strip insulation on opposite end of wire (-692), remove B267-3 terminator’s lead, and heat-shrink terminator and stripped -692 wire to shield. Insert sockets in B263-15 housing per Figure 5.

Install antenna using:

- 24-84-5 Screw (supplied with AV-300)
- 11-33-2 Countersunk washer (supplied with AV-300)
- NAS1149F0316P Washer (discard supplied split washer)
- D210-3 Nut (discard supplied nut) (3 places)

Seal around screw heads and fill holes with B270-4 sealant.
Seal around antenna base with B270-1 sealant.



Detail A

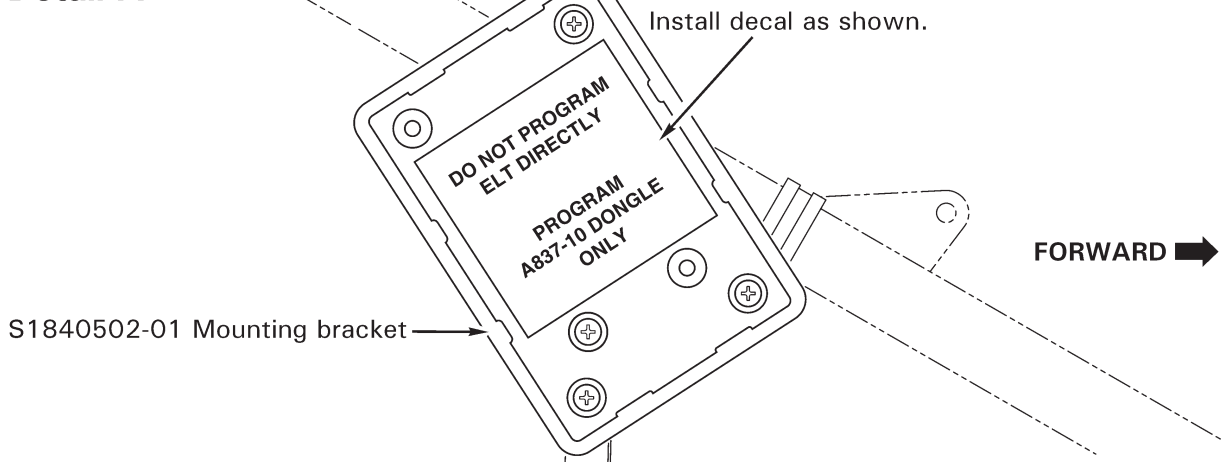


FIGURE 3

Kit Instructions (continued)

11. At aft end of shielded wire, strip insulation from and crimp B263-1 pins on orange, blue, and white wires. If shielded wire has four conductors, cut green wire flush with shield. Insert pins in B263-14 housing per Figure 5.
12. Connect forward end of cable to F837-3 remote switch. Route and secure -692 wire forward along main wire harness and connect it to ground stud at center of lateral bulkhead under floor.

WARNING

Review appropriate Safety Data Sheet (SDS) when working in proximity to hazardous materials. Specific recommendations for use of personal protective equipment are located in the SDS.

13. Refer to Figure 3. Position F837-4 doubler on C706-1 tailcone cowling interior at dimension shown and flex doubler to match cowling contour.

For new installation of ELT: Refer to Figure 4A. Drill thru doubler's (8) pilot holes with #40 drill, securing doubler to cowling with a sheet metal fastener as each hole is drilled.

For cowling having rivet holes from a previously installed ELT antenna: Refer to Figure 4B. Align aft 0.195 inch diameter screw hole of doubler with existing aft/center rivet hole on tailcone cowling. Drill pilot holes as instructed above, and back drill six existing rivet holes; do not match drill forward/center rivet hole.

Using doubler as template, match drill center 0.875 inch diameter hole and three surrounding 0.195 inch diameter holes in C706-1 cowling. Remove doubler and deburr cowling and doubler. Attach doubler to cowling using (8) or (14) MS20470AD3-4 rivets. Touch-up newly installed rivets as necessary with appropriate paint color.

NOTE

Use of a step drill is recommended to enlarge an existing antenna hole in C706-1 cowling to match 0.875 inch diameter hole in F837-4 doubler.

14. Refer to Figure 3. Discard gasket supplied with AV-300 antenna. Install AV-300 antenna in the 0.875 inch diameter hole using hardware as shown. Seal around base with B270-1 sealant. Seal over screw heads and holes with B270-13 sealant. Install tailcone cowling.
15. Refer to Figure 3. Connect KI-179-2A antenna cable to antenna, route cable to ELT mounting bracket, and secure cable to frame with ty-raps.
16. Check ELT switch is in "OFF" position and remote switch is in "ARMED" position. Connect dongle to ELT transmitter. Connect KI-179-2A antenna cable to ELT transmitter. Connect dongle to ELT remote switch cable.
17. Verify current revision status of Kannad AF Integra Operation Manual (www.kannad.com) and perform the "CHECK" procedure described in the manual.
18. Refer to Figure 3. Install ELT transmitter on mounting bracket with supplied hook & loop fastener strap. Secure ELT using MS3367-6-0 ty-rap. Ensure clearance exists between ELT installation and drive train.

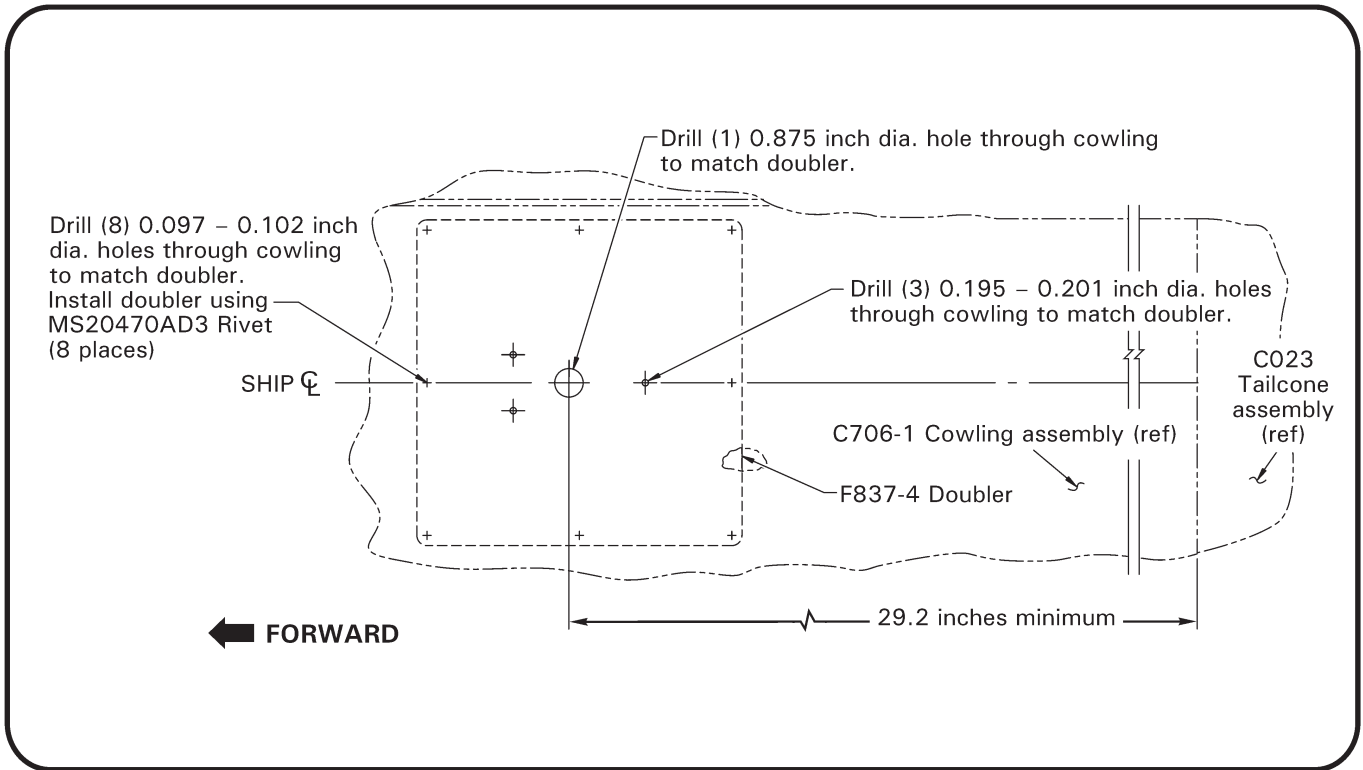


FIGURE 4A
(view looking down)

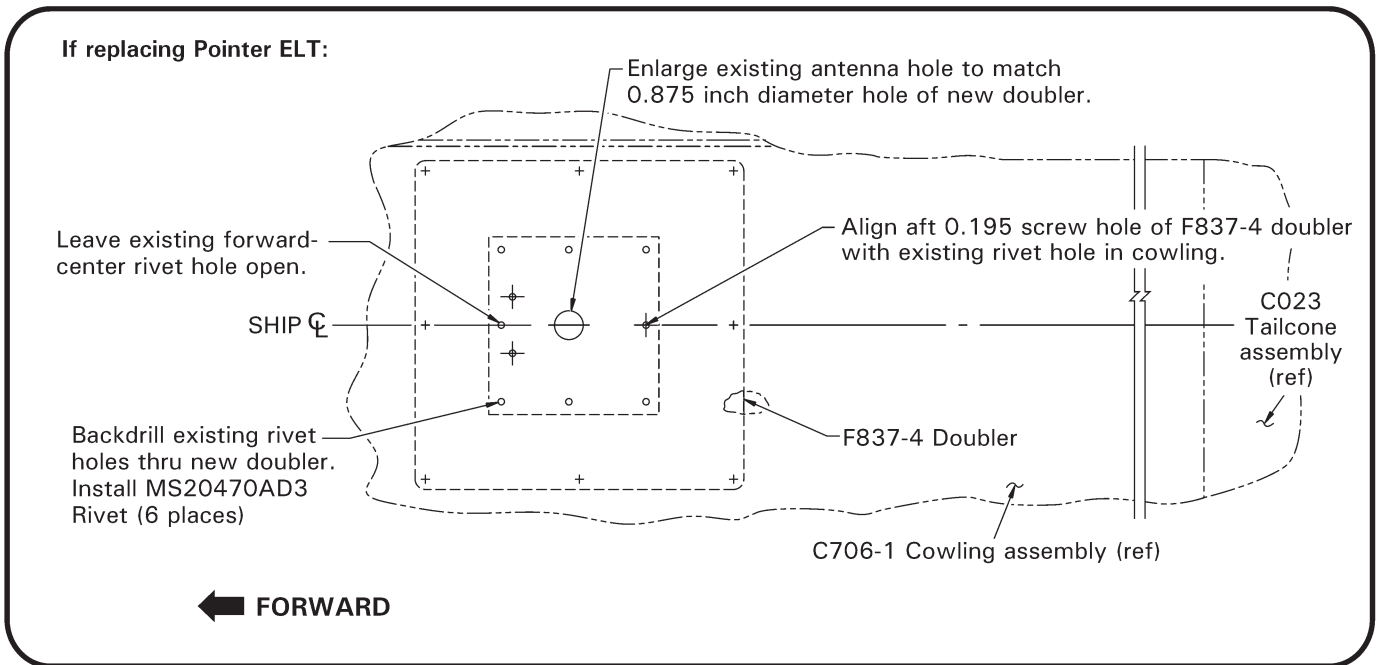


FIGURE 4B
(view looking down)

Kit Instructions (continued)

19. Ensure no foreign objects in flight controls or tunnel area. Reconnect post light wire to post light and reinstall cyclic cover. Ensure ELT remote switch wiring does not interfere with flight controls and ty-rap as required. Reinstall friction knob and spring pin, right-aft seat back, tunnel covers, belly panels, & carburetor heat knob (if applicable). Verify proper function of post light.
20. Revise Weight and Balance Record in Pilot's Operating Handbook (POH) Section 6 to reflect this installation by incorporating the following data:

Remove (as required):

Item	Weight	Long. Arm	Long. Moment	Lat. Arm	Lat. Moment
Pointer 3000-10 or 4000-10 ELT (RHC Installation)	-2.70 lb	+121.5 in.	-328 in-lb	Negligible	Negligible

Add:

Item	Weight	Long. Arm	Long. Moment	Lat. Arm	Lat. Moment
Kannad AF Integra ELT (RHC Installation)	+2.51 lb	+119.48 in.	+300 in-lb	-4.16 in.	-10.45 in-lb

21. Make appropriate maintenance record entries.
22. The helicopter owner or operator must register the ELT. Visit www.cospas-sarsat.org for instructions.

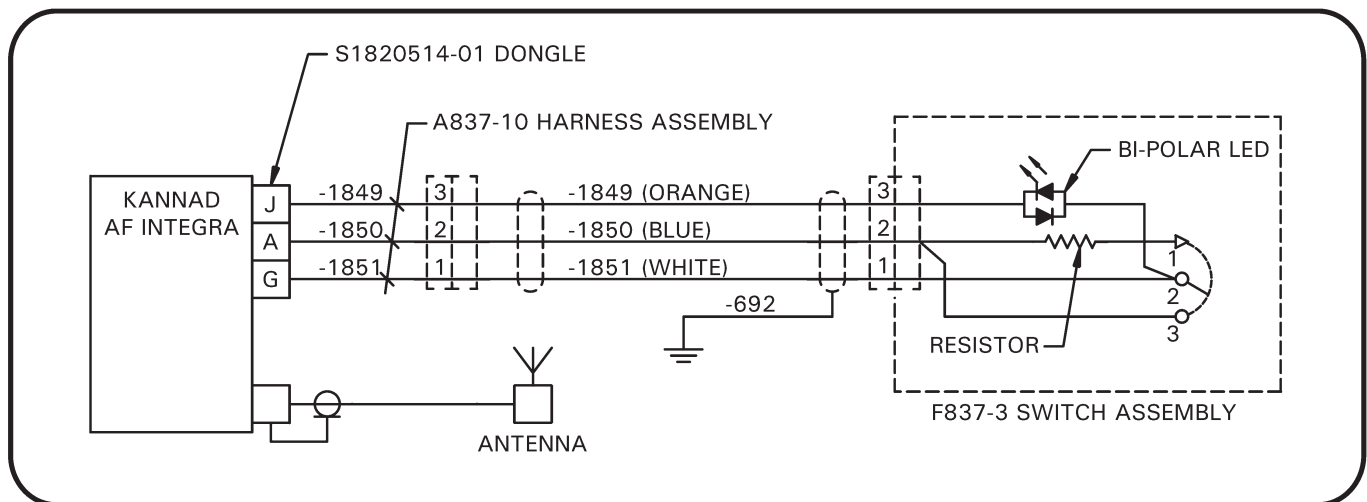


FIGURE 5