

CHAPTER 97

AVIONICS

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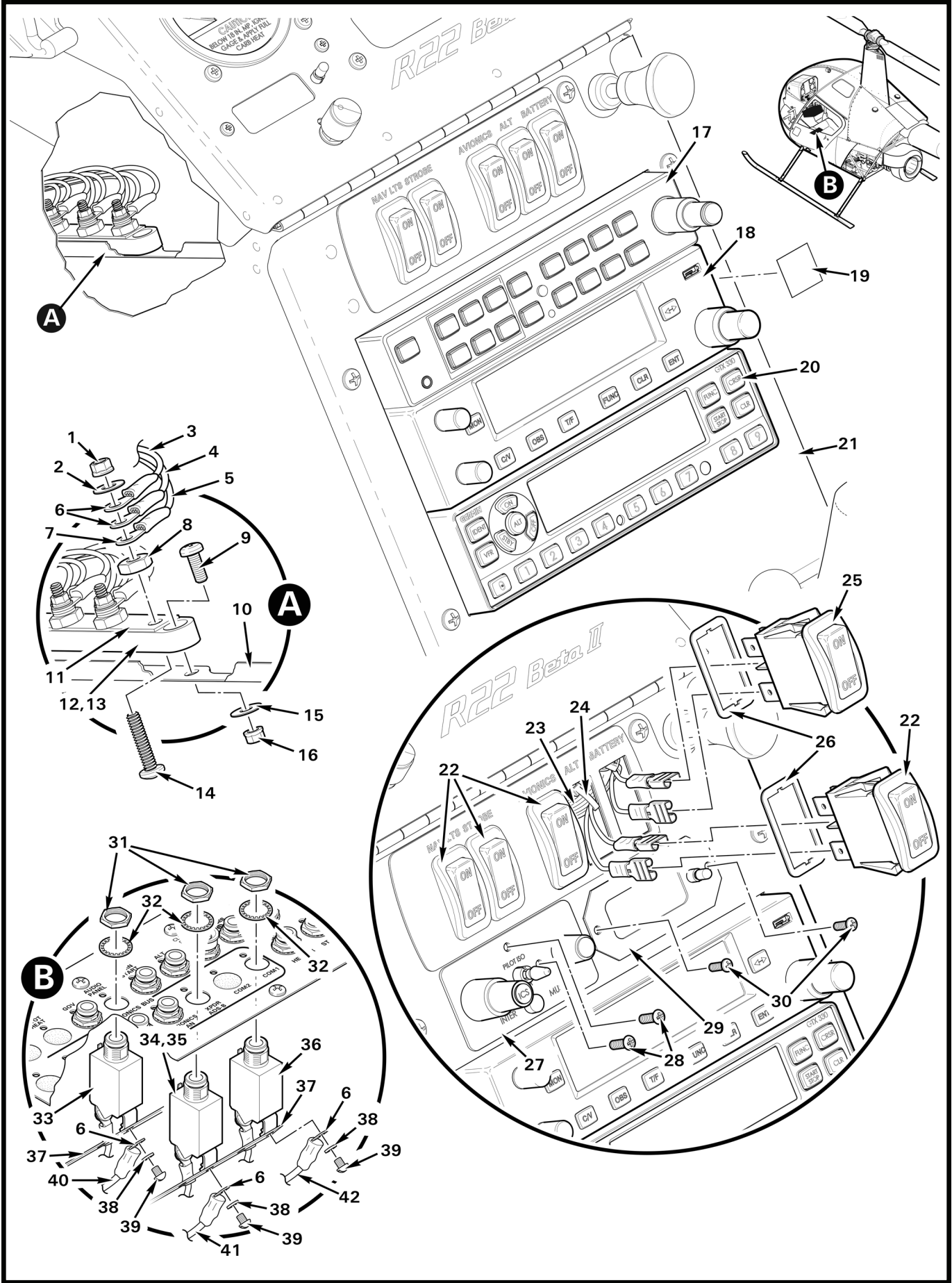


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		AVIONICS OPTIONS FOR R22*		
97-1-1	MS21042L08	Nut	X	4
2	NAS1149FN816P	Washer	X	1
3	A859-643	Wire – Ground (Ref, audio control)		
4	-201	Wire – Ground (Ref, transceiver)		
5	-260	Wire – Ground (Ref, transponder)		
6	B260-2	Terminal	X	5
7	B260-3	Terminal	X	1
8	B301-8	Nut	X	4
9	MS35206-228	Screw	X	2
10	A365-1	Angle – Console (Ref)		
11	A448-10	Bus Bar	X	1
12	C448-2	Terminal Block Assembly (Incl items 8, 11, 13, and 14)	X	1
13	C448-5	Block	X	1
14	B567-43	Screw	X	1
15	NAS1149FN616P	Washer	X	2
16	MS21042L06	Nut	X	1
17	GMA350HC**	Audio Control	X	1
18	GTR 225B**	Transceiver	X	1
	KY 197A***	Transceiver (older R22s, not shown)	X	1
19	F654-38	Decal – “No. 1 COM, No. 2 COM, No. 3 COM”	X	A/R
20	GTX 330ES*	Transponder	X	1
	GTX 328**	Transponder (older R22s, mode “S”)	X	1
	GTX 327**	Transponder (older R22s, mode “C”)	X	1
21	A641	Face Assembly (Ref)		
22	G184-1	Switch Assembly (white-colored)	X	4
23	D049-6	Harness Assembly (Incl item 24)	X	1
24	MS3367-4-9	Ty-Rap	X	A/R
25	G184-2	Switch Assembly (red-colored)	X	1
26	G184-5	Gasket	X	5
27	B338-2	Intercom System Unit (Incl item 28)	X	1
28	—	Screw	O	3
29	B341-1	Outside Air Temperature Gage (Incl item 30)	X	1
30	—	Screw (UNC 4-40)	O	2
31	—	Nut	O	1
32	—	Lockwasher	O	1

NOTES * Exact panel configuration may vary with optional equipment.

** Garmin part no.

*** Bendix-King part no.

Continues

FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
AVIONICS OPTIONS FOR R22 (Cont'd)				
97-1-33	B297-5	Circuit Breaker (5 amp, for use with item 17; includes items 31, 32, 38, and 39)	X	1
34	B297-3	Circuit Breaker (3 amp, for use with item 20 [GTX 327*]; includes items 31, 32, 38, and 39)	X	A/R
35	B297-5	Circuit Breaker (5 amp, for use with item 20 [GTX 328* and GTX 330ES*]; includes items 31, 32, 38, and 39)	X	A/R
36	B297-10	Circuit Breaker (10 amp, for use with item 18; includes items 31, 32, 38, and 39)	X	A/R
37	A448	Bus Bar (Ref)		
38	—	Washer	O	2
39	—	Screw	O	2
40	A859-644	Wire – Power (Ref, audio panel)		
41	A859-263	Wire – Power (Ref, transponder)		
42	A859-200	Wire – Power (Ref, COM)		
NOTES * Garmin part no.				

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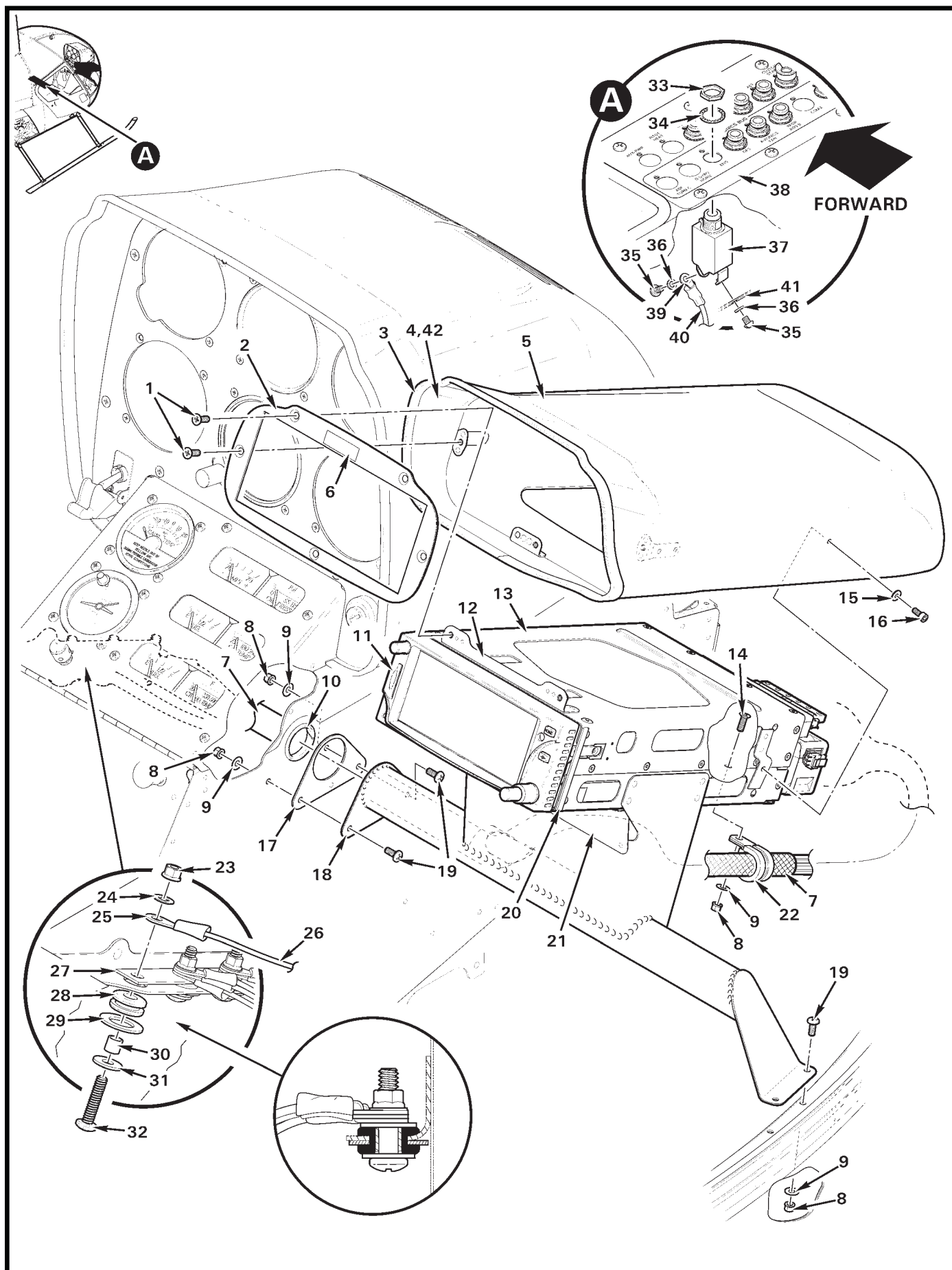


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		C831 GPS INSTALLATION – GARMIN GTN 600 SERIES		
97-5-1	MS24693-S26	Screw	X	5
2	G704-5	Faceplate	X	1
3	A226-11	Trim	X	A/R
4	B298-10	Visor Liner (install using item 42)	X	A/R
5	G704-1	Shell Assembly (Incl items 3 and 4)	X	1
6	F654-40	Decal (trim as required)	X	1
7	B266-8	Sleeving	X	A/R
8	MS21042L08	Nut	X	5
9	NAS1149FN816P	Washer	X	4
10	NAS557-14B	Grommet	X	1
11	GTN 650*	Transceiver (GPS/NAV/COM)	X	1
	GTN 635*	Transceiver (GPS/COM, not shown)	X	1
	GTN 625*	Transceiver (GPS, not shown)	X	1
12	G704	Angle Assembly (Ref)		
13	—	Radio Rack Assembly (Ref, supplied with receiver or transceiver)	O	1
14	MS24694-S4	Screw	X	1
15	NAS1149FN616P	Washer	X	3
16	92196A145	Screw	X	2
17	B703-8	Shim (3 maximum)	X	A/R
18	B703-1	Support Weldment	X	1
19	MS27039C0806	Screw	X	4
20	A226-7	Seal	X	A/R
21	G704-9	Support	X	1
22	MS21919WDG16	Clamp	X	1
23	MS21042L06	Nut	X	1
24	NAS620-6L	Washer	X	1
25	B260-3	Terminal (Ref)		
26	-465	Wire (Ref)		
27	A448-15	Bus Bar (Ref)		
28	MS35489-4	Grommet	X	1
29	NAS1149F0532P	Washer (install in grommet groove**)	X	1
30	C130-59	Spacer (install in grommet bore**)	X	1
31	NAS1149FN632P	Washer	X	1
32	B567-28	Screw	X	1
33	—	Nut	X	1
NOTES * Garmin part no. ** See detail showing parts assembled.				
				Continues

FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		C831 GPS INSTALLATION – GARMIN GTN 600 SERIES* (Cont'd)		
97-5-34	—	Lockwasher	X	1
35	—	Screw	O	2
36	—	Washer	O	2
37	B297-7	Circuit Breaker (7 amp, 14-volt ships; includes items 33 thru 36. GPS only.)	X	1
	B297-10	Circuit Breaker (10 amp, 14-volt ships; includes items 33 thru 36. For GPS with COM or COM/NAV, also install [1] B297-7.)	X	1
38	B490-5	Panel – Circuit Breaker (Ref)		
39	B260-2	Terminal (Ref)		
40	-1426	Wire (Ref)		
41	A448-15	Bus Bar (Ref)		
42	B270-8qt	Adhesive	X	A/R
NOTES				

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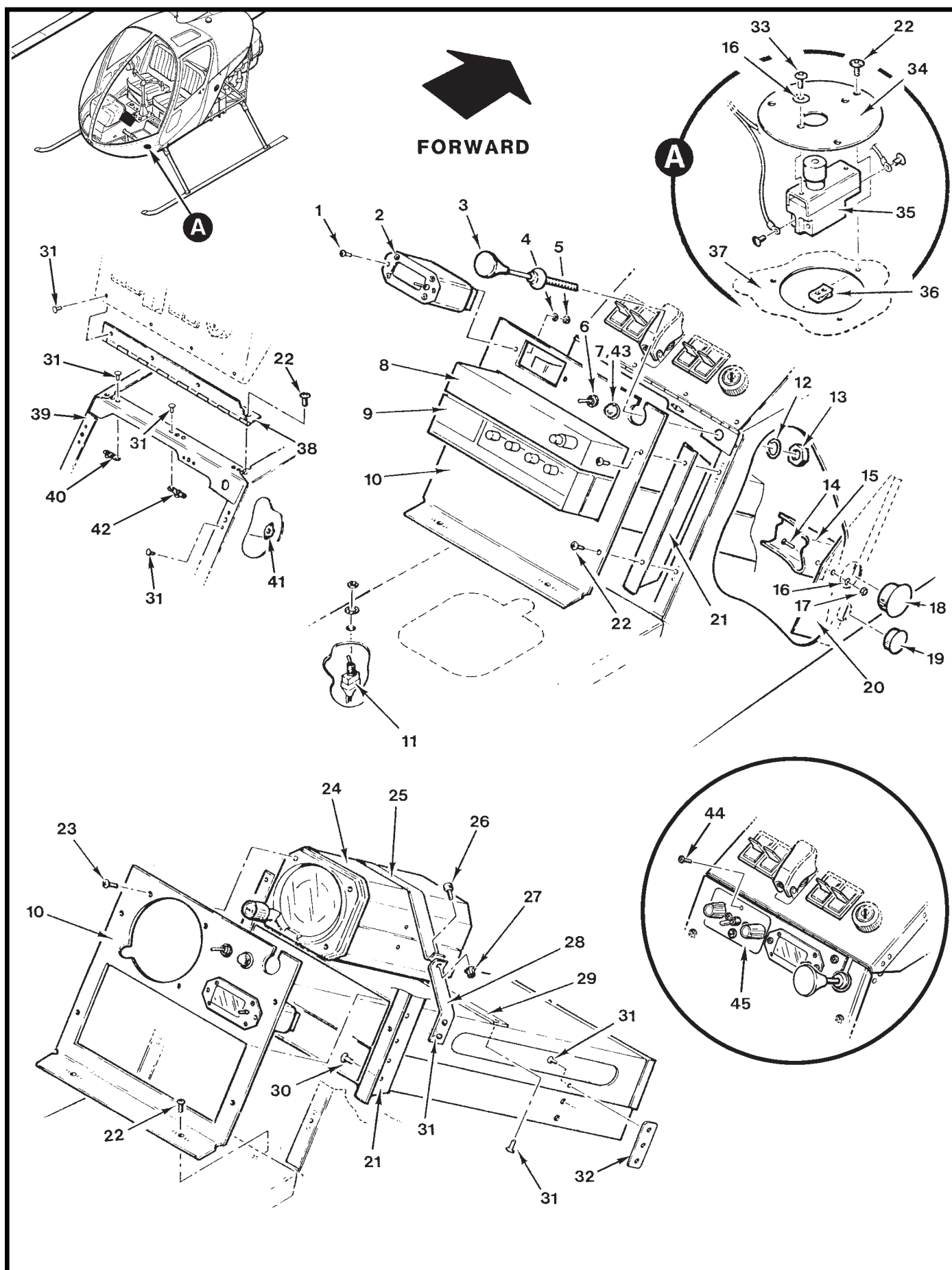


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		LOWER CONSOLE AND RADIO INSTALLATION		
97-9-1	—	Screw (included with item 2)	O	2
2	B341-1	Outside Air Temp Gauge (ship S/N 0425 and subsequent, requires B341-2 probe)	X	1
	R9100	Outside Air Temp Gauge (overhaul exchange)	X	1
3	A522-1	Control Assembly – Cabin Air (Incl items 12 and 13)	X	1
4	NAS1149FN416P	Washer	X	2
5	MS21042L04	Nut	X	2
6	B049-9*	Switch Assembly – Landing Light (includes B300-1 switch, wires, and connector)	X	1
	B300-1	Switch (switch only)	X	1
7	B198-1*	Warning Light – Rotor Brake (yellow; order item 43 when replacing)	X	1
8	KY 197A	VHF COM Receiver (Bendix/King, TSO'd)	O	1
9	KT 76A	Transponder (Bendix/King, TSO'd)	O	1
	KT 76C	Transponder (Bendix/King, TSO'd; not shown)	O	1
	GTX327	Transponder (Garmin, TSO'd; not shown)	O	1
	GTX330	Transponder (Garmin, TSO'd; not shown)	O	1
10	A641	Avionics Face (specify dash no. when ordering)	X	1
11	B300-2	Switch – Mic Selector	X	1
12	—	Washer	O	1
13	—	Nut	O	1
14	—	Screw (supplied with radio)	O	2
15	—	Tray (supplied with radio)	O	1
16	NAS1149FN616P	Washer	X	2
17	MS21042L06	Nut	X	2
18	2713	Hole Plug	X	2
19	DP-625	Hole Plug	X	2
20	A371-1	Stiffener (LH)	X	1
	A371-2	Stiffener (RH)	X	1
21	A905-3	Angle (RH and LH)	X	1
22	MS27039C0806	Screw	X	7
23	MS35206-231	Screw	X	3
24	066-03034-0000**	VOR Indicator (KI 203, VOR/LOC)	O	1
	066-03034-0002**	VOR Indicator (KI 204, VOR/LOC/GS)	O	1
	GI 106B	VOR Indicator (Garmin part no., VOR/LOC/GS/GPS)	O	1
	066-03056-0000**	VOR Indicator (KI 208, earlier aircraft)	O	1

NOTES * This location ship S/N 2966 and prior.
 ** Bendix/King part no.

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FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		LOWER CONSOLE AND RADIO INSTALLATION (Cont'd)		
97-9-25	A686-1	Strap (Ref, no longer available)		
26	NAS1352-08-8P	Screw	X	1
27	MS21042L08	Nut (Ref)	X	1
28	A686-2	Strap (Ref, no longer available)		
29	A736-1	Support	X	1
30	MS20426AD5	Rivet	X	A/R
31	MS20426AD3	Rivet	X	A/R
32	A684-1	Strap	X	A/R
33	AN502-6-6	Screw	X	2
34	A797-1	Cover	X	1
35	B565-1	Switch – Intercom, Floor (includes screws)	X	1
36	B162-3	Clipnut	X	3
37	A232-1	Floor Panel (LH, Ref)		
38	A356-2	Hinge	X	1
39	A033-1	Lower Console (Ref)		
40	MS21086L08	Nutplate	X	2
41	MS21075L08E	Nutplate	X	5
42	MS21069L08	Nutplate	X	1
43	B196-1	Lamp	X	1
44	—	Screw	O	3
45	B338-1	Intercom System Control Unit (Incl item 44)	X	1
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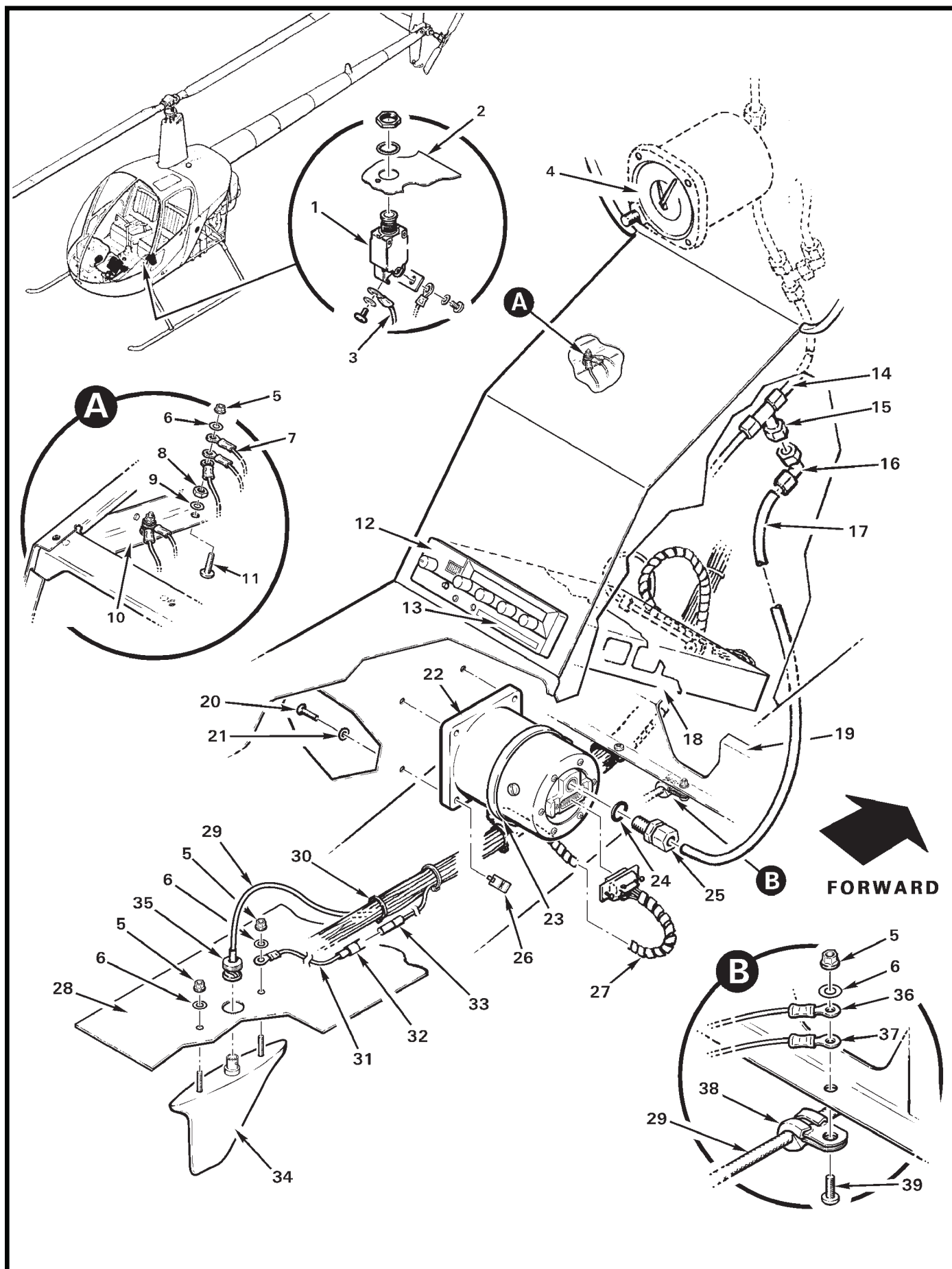


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		TRANSPONDER AND BLIND ENCODER INSTALLATION		
97-13-1	B297-2	Circuit Breaker (2-amp, KT76A* installed)	X	1
	B297-3	Circuit Breaker (3-amp, GTX327** installed)	X	1
	B297-5	Circuit Breaker (5-amp, KT76C* or GTX330** installed)	X	1
2	—	Panel – Circuit Breaker		
3	-263	Wire (Ref)		
4	A613	Altimeter (Ref)		
5	MS21042L08	Nut	X	4
6	NAS1149FN816P	Washer	X	4
7	-260	Wire – Ground (Ref, transponder)		
8	B301-8	Nut	X	1
9	NAS1149DN832H	Washer	X	1
10	A365-1	Angle (LH, Ref)		
11	B567-43	Screw (brass)	X	1
12	KT 76A*	Transponder (Incl item 18)	O	1
	KT 76C*	Transponder (Incl item 18; not shown)	O	1
	GTX327**	Transponder (Incl item 18; not shown)	O	1
	GTX330**	Transponder (Incl item 18; not shown)	O	1
13	A654-69	Decal – “Altitude Encoder Installed”	X	1
14	A729-24	Tube (Ref)		
15	60-4-2-N-0	Tee	X	1
16	45-4-2-N-0	Elbow	X	1
17	A729-16	Tube (Ref, no longer available)		
18	—	Tray	O	1
19	A407-1	Beam – Floor (Ref)		
20	MS35206-232	Screw	X	4
21	NAS1149FN616P	Washer	X	4
22	B240-1	Blind Encoder (Ref, no longer available. Order KI-57-1 installation kit to replace; see Figure 97-17.)		
23	MS3367-7-9	Ty-Rap	X	1
24	A215-204	O-Ring	X	1
25	10-4-2-N-0	Fitting	X	1
26	MS33737-16C	Instrument Nut	X	4
27	B241-1	Wire Harness	X	1
28	A794-2	Panel (Ref)		
29	A859-264	Cable (Ref)		
NOTES * Bendix/King part no. ** Garmin part no.				

Continues

FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		TRANSPONDER AND BLIND ENCODER INSTALLATION (Cont'd)		
97-13-30	MS3367-4-9	Ty-Rap (or MS3367-5-9)	X	A/R
31	-266	Wire (Ref)		
32	B263-10	Housing	X	1
	B263-1	Pin	X	1
33	B263-11	Housing	X	1
	B263-2	Socket	X	1
34	CI-105-16	Antenna – Transponder	X	1
35	225395-6	Plug	X	1
36	-561	Wire (Ref)		
37	-266	Wire – Ground (Ref; antenna)		
38	MS21919WDG3	Clamp	X	1
39	MS27039C0806	Screw	X	1
NOTES				

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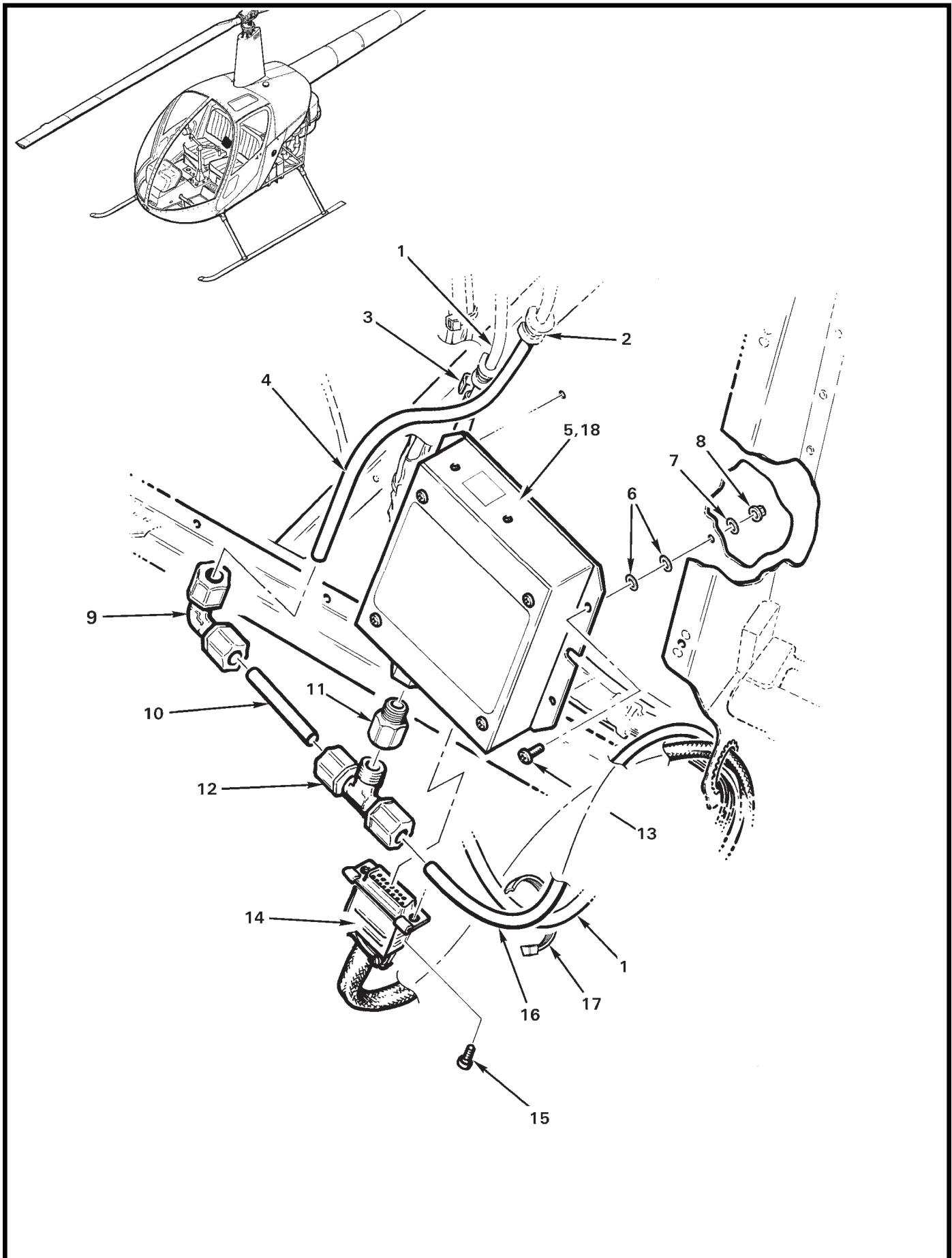


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		SOLID-STATE BLIND ENCODER INSTALLATION		
97-17-1	A729-28	Tube – Pitot (Ref)		
2	MS21919WDG4	Clamp (Ref)		
3	B161-4	Spirap (wrap around item 1 as required)	X	A/R
4	A729-6	Tube	X	1
5	B240-3	Blind Encoder (solid state)	X	1
	B240-2	Blind Encoder (solid state)	X	1
6	NAS1149CN432R	Washer	X	8
7	NAS1149FN416P	Washer	X	4
8	MS21042L04	Nut	X	4
9	50-4-N-0	Elbow	X	1
10	A729-30	Tube	X	1
11	50785K25	Fitting (brass)	X	1
12	60-4-2-N-0	Tee	X	1
13	MS35206-214	Screw	X	4
14	B241-1	Harness Assembly (Incl item 15)	X	1
15	—	Screw	O	2
16	A729-22	Tube – Static (Ref)		
17	MS3367-5-9	Ty-Rap	X	A/R
		* * *		
18	KI-57-1	Solid-State Blind Encoder Installation Kit (Includes items 3, 5 [B240-3], 6 thru 9, 12 thru 14, 17 [30], 19, 20 and item 13 from Figure 97-13.)	X	1
19	B261-2	Splice	X	1
20	A729-26	Tube	X	1
NOTES				

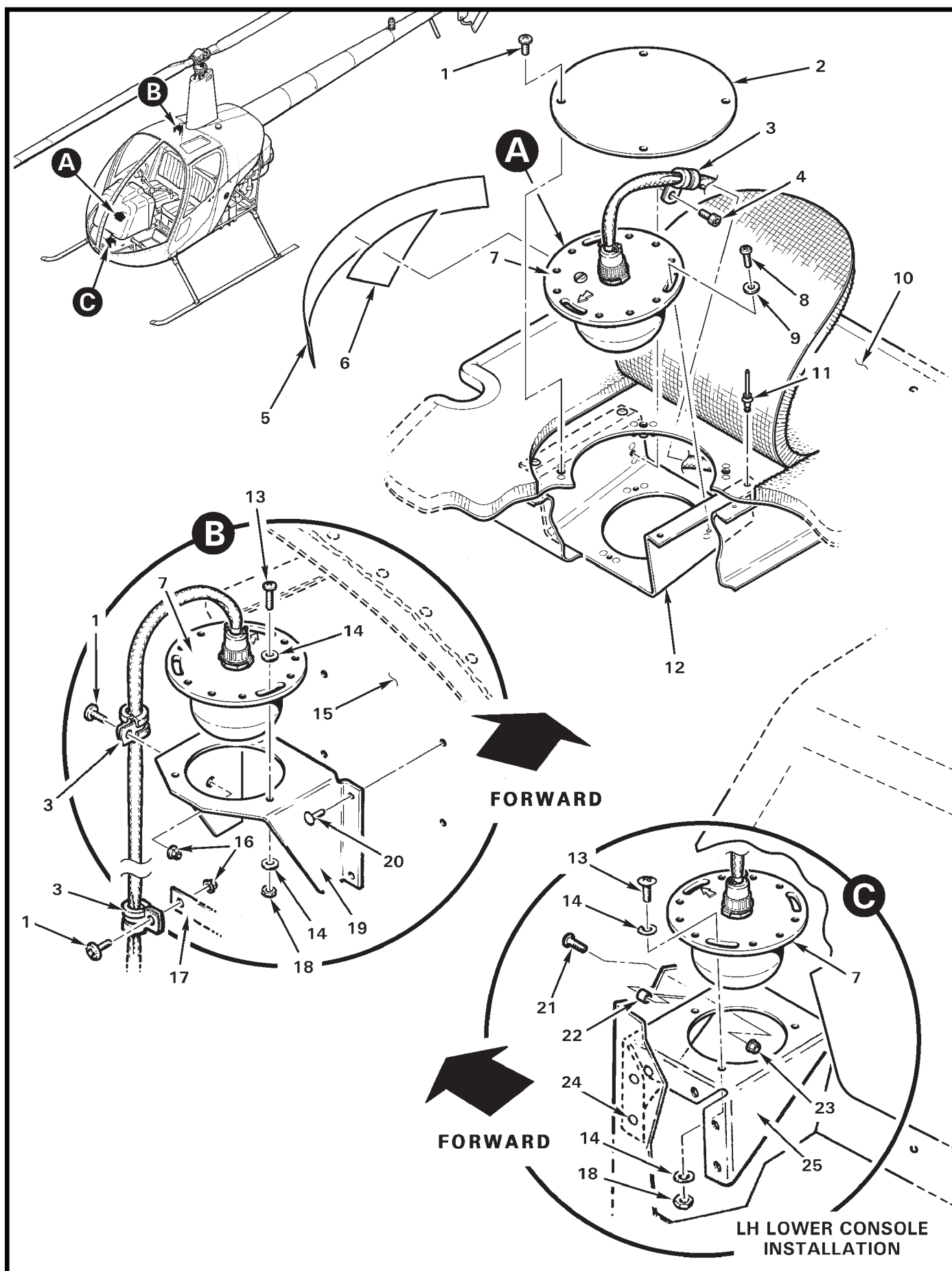


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		FLUX GATE INSTALLATION		
97-19-1	MS27039C0806	Screw	X	6
2	A990-3	Cover	X	1
3	MS21919WDG4	Clamp	X	A/R
4	NAS1352C08-6	Screw	X	1
5	C988-9	Decal	X	1
6	C988-10	Mu-Metal (if installed)	X	1
7	KMT 112	Magnetic Azimuth Transmitter (Flux Gate; Bendix/King. Includes items 20 thru 22. Subsequent installations are mounted under RH floor [view A]. Earlier R22s have aft RH bulkhead mount [view B], or console mount, [view C].)	O	1
8	MS35214-27	Screw	X	3
9	NAS1149BN616H	Washer	X	3
10	A469-23	Carpet Assembly (Ref; scuff plate not shown for clarity)		
11	NAS1919B04S01	Rivet	X	4
12	A990-1	Bracket Assembly	X	1
13	089-7009-0010*	Screw (non-magnetic)	O	3
14	089-8036-0019*	Washer (non-magnetic)	O	6
15	A259-1	Bulkhead Assembly (Ref)		
16	NAS1291C08M	Nut	X	2
17	B129-1	Channel (Ref)		
18	089-2157-0015*	Nut (non-magnetic)	O	3
19	A987-3	Bracket (earlier R22s)	X	1
20	MS20470AD4	Rivet	X	6
21	MS27039C0808	Screw	X	1
22	A130-36	Spacer	X	1
23	MS21043-08	Nut	X	1
24	MS20470AD3-3.5	Rivet	X	6
25	A987-2	Bracket (earlier R22s)	X	1
NOTES * Bendix-King part no.				

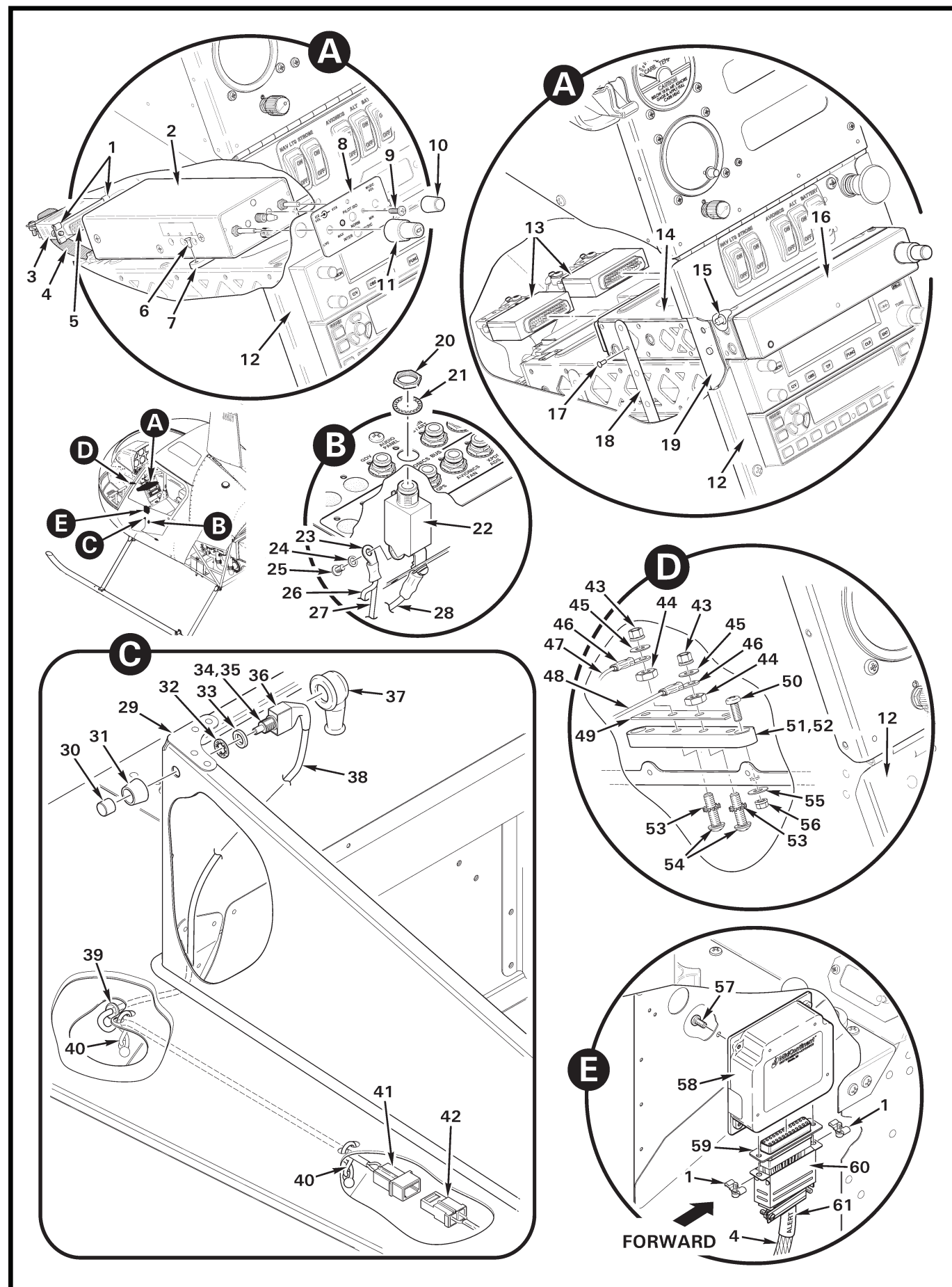


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		INTERCOM CONTROL INSTALLATION		
97-21-1	B269-31	Male Screw Lock	X	2
2	B338-2	Intercom System Unit (Includes items 8 thru 11. Contact RHC Technical Support to replace B338-1 ICS control. B338-2 control not compatible with old-revision C049 harness assembly.)	X	1
3	B269-23	Backshell	X	1
4	B266-8	Sleeving	X	A/R
5	B269-82	Receptacle (44-socket)	X	1
	B267-5	Splice	X	1
	B267-2	Terminator (not shown)	X	7
	B267-3	Terminator (not shown)	X	5
6	MS20426AD3	Rivet	X	2
7	A736-1	Support (install using item 6)	X	1
8	50-04-832*	Faceplate	X	1
9	25-11-427	Screw	X	3
10	40-18-MUS2	Knob (small)	X	1
11	40-21-ICS3	Knob (large)	X	1
12	B640	Panel – Avionics (Ref)		
13	011-02302-00**	Connector Kit (Ref)		
14	115-01452-00**	Install Rack (Ref)		
15	MS20426AD5	Rivet	X	4
16	GMA350HC**	Audio Control (Incl items 13 and 14)	X	1
17	NAS1097AD3	Rivet	X	4
18	A684-1	Strap	X	2
19	A905-3	Angle	X	2
20	—	Nut	O	1
21	—	Washer	O	1
22	B297-3	Circuit Breaker (3 amp; used with item 2. Includes items 20, 21, 24, and 25.)	X	1
	B297-5	Circuit Breaker (5 amp; used with item 16. Includes items 20, 21, 24, and 25.)	X	1
23	B260-2	Terminal	X	2
24	—	Washer	O	2
25	—	Screw	O	2
26	A859-2916	Wire (Ref; power, item 58)		
27	A859-644	Wire (Ref; power, items 2 and 16)		
NOTES * N.A.T. part number. ** Garmin part number.				
Continues				

FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		INTERCOM CONTROL INSTALLATION (Cont'd)		
97-21-28	A859-3078	Wire (Ref)		
29	A291	Aft Seat Support Assembly (LH shown; Ref)		
30	801801000	Cap (white)	X	1
31	702501201	Dress Nut	X	1
32	B227-3	Lockwasher	X	1
33	94773A770	Washer	X	1
34	C049-10	Harness Assembly (LH and RH, includes items 35 thru 39) . . .	X	2
35	B227-8	Switch Assembly (Incl items 30 thru 33)	X	1
36	B158-8	Heat Shrink (around item 35)	X	A/R
37	MS25171-1S	Nipple	X	1
38	B158-2	Heat Shrink (around wires)	X	A/R
39	MS35489-4	Grommet	X	1
40	232-35359-03	Tie	X	2
41	B263-12	Housing	X	1
	B263-1	Pin	X	2
42	B263-13	Housing (Ref)		
43	MS21042L08	Nut	X	2
44	B301-8	Nut	X	4
45	NAS1149FN816P	Washer	X	2
46	B260-3	Terminal	X	2
47	A859-2917	Wire (Ref; ground, item 58)		
48	A859-643	Wire (Ref; ground, items 2 and 16)		
49	A448-10	Bus Bar	X	1
50	MS35206-228	Screw	X	2
51	C448-2	Terminal Block Assembly (Incl items 44, 49, and 52 thru 54) .	X	1
52	C448-5	Block (Ref)		
53	91120A130	Washer	X	4
54	B567-43	Screw	X	4
55	NAS1149FN616P	Washer	X	2
56	MS21042L06	Nut	X	2
57	MS35206-227	Screw	X	2
58	F793-1	Alert Box	X	1
59	B269-12	Receptacle (25-socket)	X	1
60	B269-23	Backshell	X	1
61	B158-8	Heat Shrink (labeled "ALERT")	X	A/R
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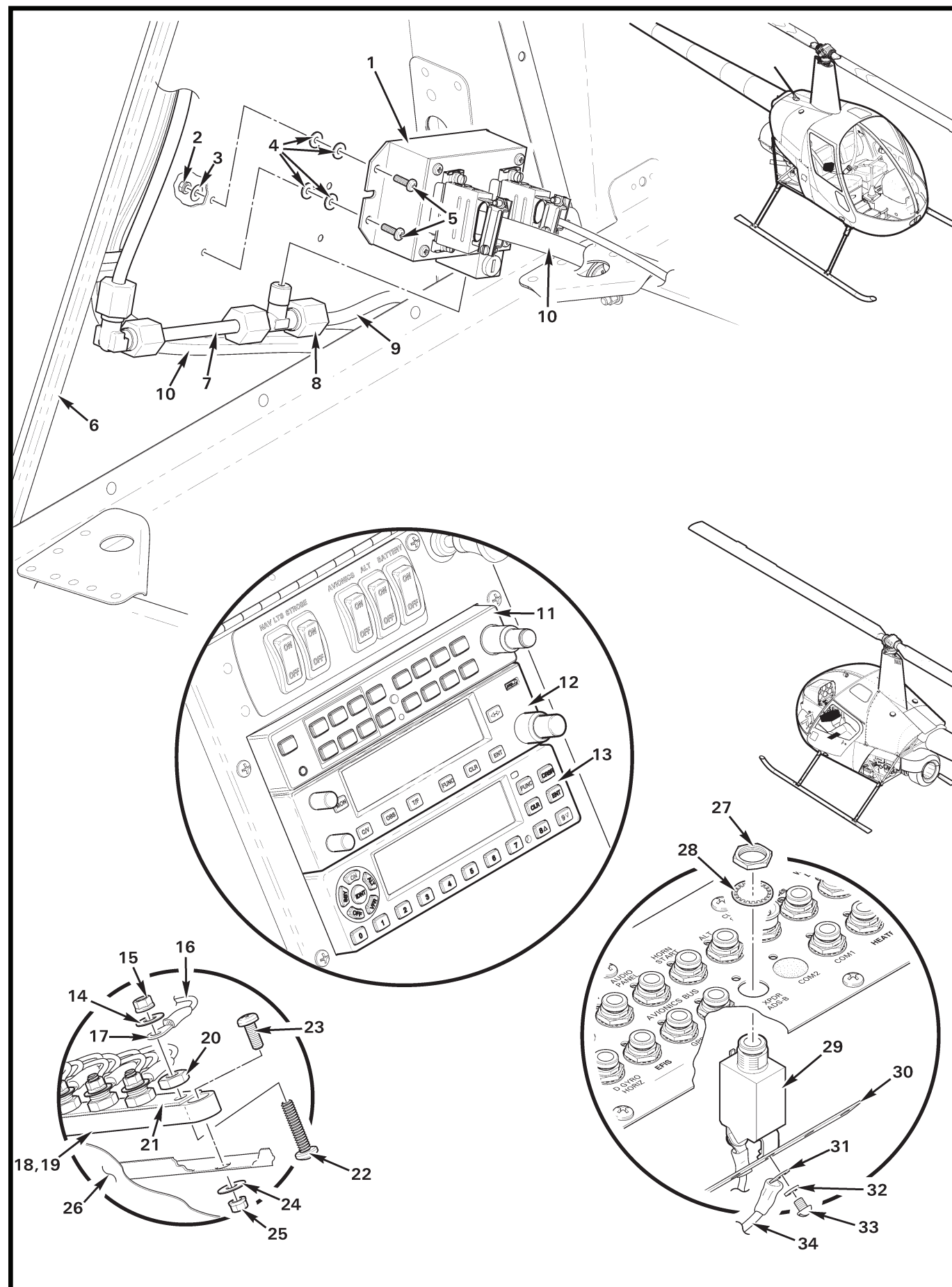


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		GARMIN GTX 335 AND 345 TRANSPONDER & BLIND ENCODER		
97-25-1	B240-3	Blind Encoder	X	1
2	MS21042L04	Nut	X	4
3	NAS1149FN416P	Washer	X	4
4	NAS1149CN432R	Washer	X	8
5	MS35206-215	Screw	X	4
6	A8384-3	Stiffener (Ref)		
7	A729-26	Tube (Ref)		
8	60-4-2-N-0	Tee	X	1
9	A729-22	Tube (Ref)		
10	A859	Harness Assembly (Ref)		
11	GMA350HC*	Audio Control (Ref)		
12	GTR 225B*	Transceiver (Ref)		
13	GTX 335*	Transponder (Mode "S" and ADS-B Out)	X	1
	GTX 345*	Transponder (Mode "S" and ADS-B In/Out)	X	1
14	NAS1149FN816P	Washer	X	1
15	MS21042L08	Nut	X	1
16	-260	Wire (Ref)		
17	B260-3	Terminal	X	1
18	C448-2	Terminal Block Assembly (Incl items 19 thru 22)	X	1
19	C448-5	Block	X	1
20	B301-8	Nut	X	1
21	A448-10	Bus Bar	X	1
22	B567-43	Screw	X	1
23	MS35206-228	Screw	X	2
24	NAS1149FN616P	Washer	X	2
25	MS21042L06	Nut	X	2
26	A033	Console Assembly – Lower (Ref)		
27	—	Nut	O	1
28	—	Lockwasher	O	1
29	B297-3	Circuit Breaker (3 amp; includes 27, 28, 32, and 33)	X	1
30	A448	Bus Bar (Ref)		
31	B260-2	Terminal	X	1
NOTES * Garmin part no. Continues				

FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		GARMIN GTX 335 AND 345 TRANSPONDER & BLIND ENCODER (Cont'd)		
97-25-32	—	Washer (Ref)		
33	—	Screw (Ref)		
34	A859-263	Wire (Ref; power, item 13)		
NOTES				

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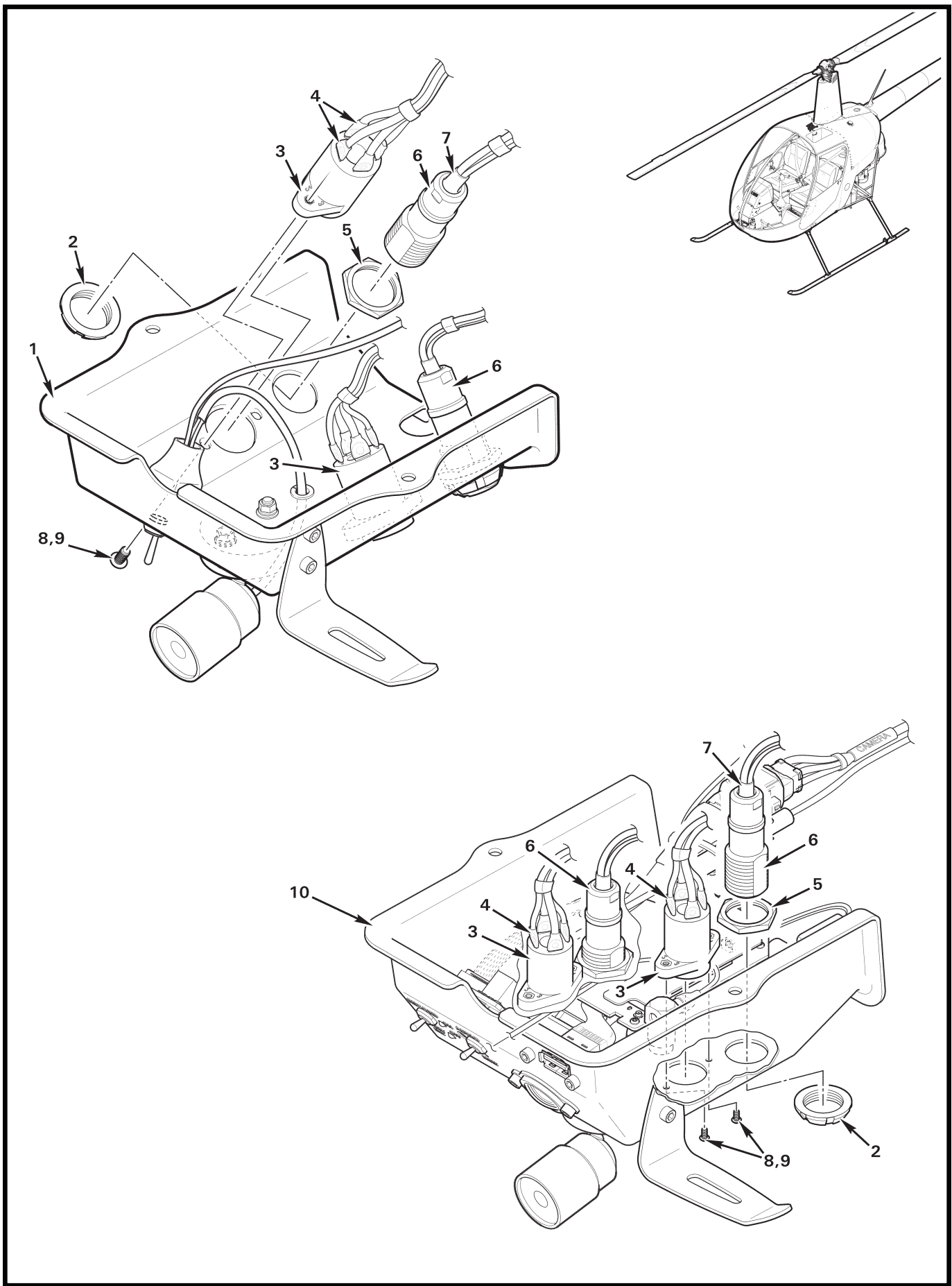


FIGURE AND INDEX NUMBER	PART NUMBER	DESCRIPTION	PARTS AVAIL	QTY PER ASSY
		HEADSET JACKS		
97-29-1	A039-14	Spotlight Assembly (Ref; see Figure 33-13)		
2	–	Dress Nut	O	2
3	TJ-120	Jack	X	2
4	B158-4	Heat Shrink	X	A/R
5	–	Hex Nut	O	2
6	D746-3	Connector Assembly – Bose (optional; incl items 2 and 5) . . .	X	A/R
	D746-4*	Connector Assembly – Bose (standard; incl items 2 and 5) . . .	X	2
7	B158-3	Heat Shrink	X	A/R
8	A142-5	Screw	X	4
9	B270-20	Adhesive	X	A/R
10	F039-1	Enclosure Assembly – Cockpit Camera (ref; see Figure 96-37)		
NOTES * Standard equipment on R22 S/N 4825 and subsequent.				

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