

CHAPTER 6

DIMENSIONS AND DESCRIPTIONS

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CHAPTER 6

DIMENSIONS AND DESCRIPTIONS

6-10 Version Description

Type Certificate Data Sheet (TCDS) R00015LA is available at FAA Dynamic Regulatory System website: <https://drs.faa.gov>.

R66, Turbine: Five place, single-engine, single main rotor, light turbine helicopter. Two-bladed teetering main rotor system with conventional two-bladed tail rotor. Rolls-Royce model 250-C300/A1 turboshaft engine normally rated at 300 shaft horsepower (SHP); 270 SHP 5-minute take-off rating. Maximum gross weight 2700 pounds. Primary fuel is Jet-A (see R66 Pilot's Operating Handbook); 74.6 US gallon fuel tank capacity.

6-20 Datum

The datum is located 100 inches forward of main rotor centerline.

6-30 Method of Measurement

Fuselage station, tailcone station, water line station, and butt line station values are measured in inches, rounded to the nearest hundredth.

6-40 External Dimensions

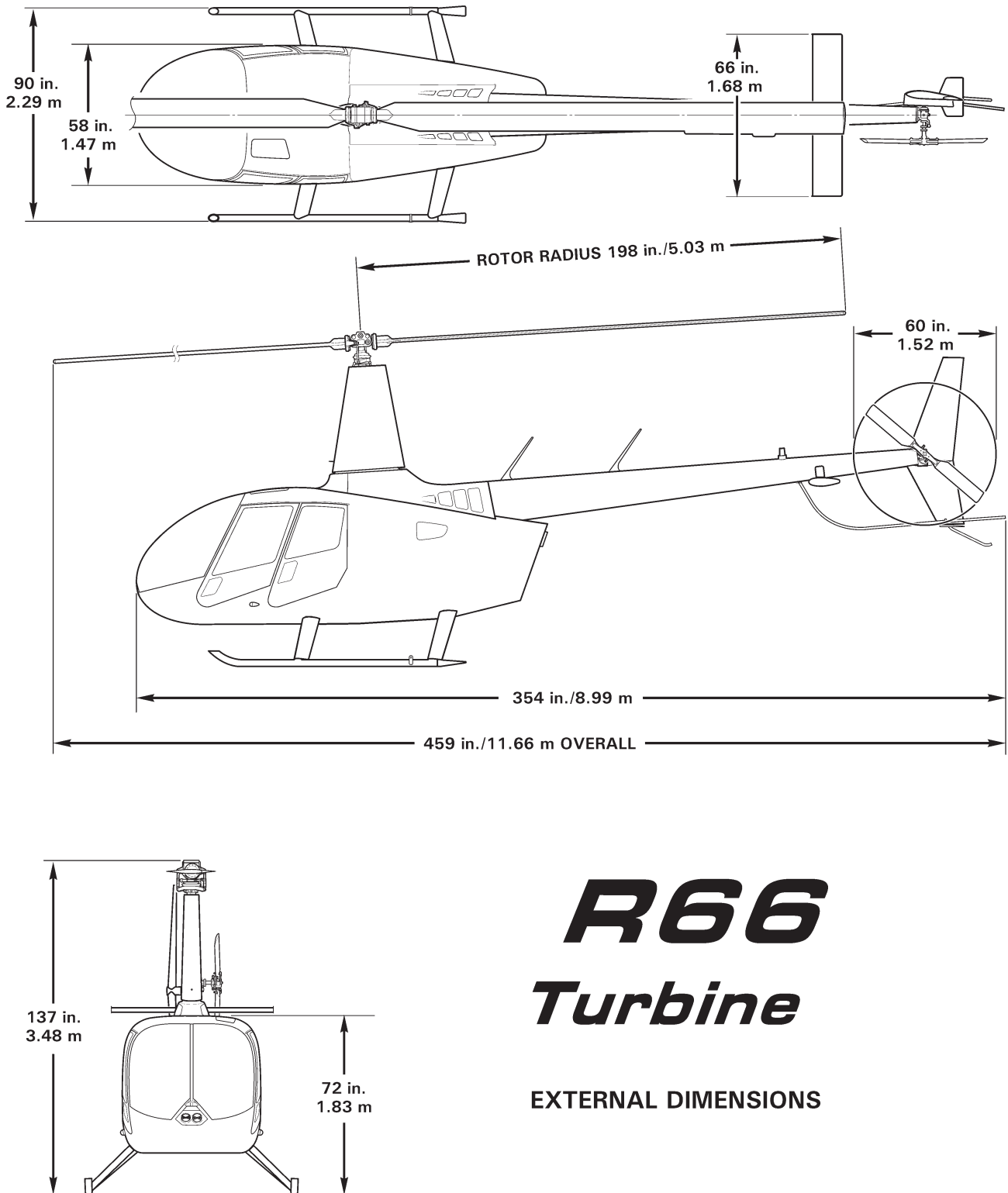
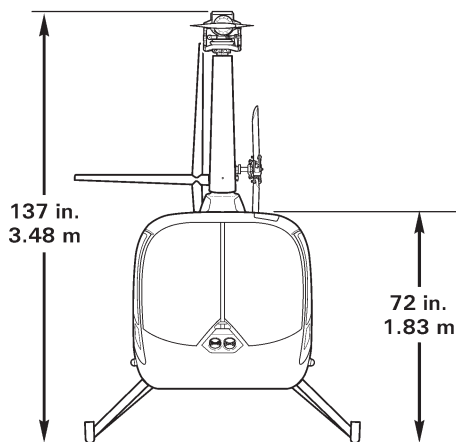
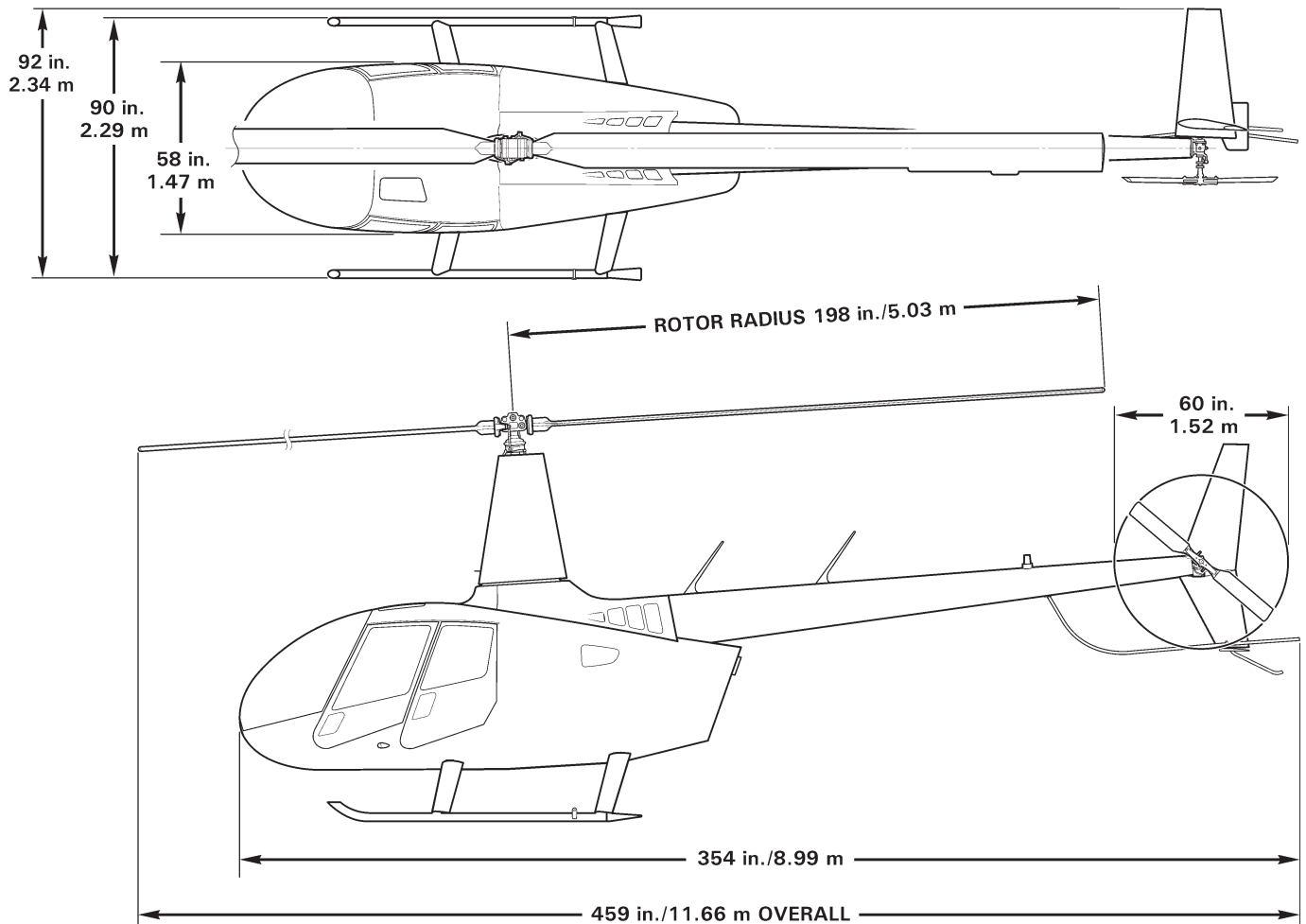


FIGURE 6-1 EXTERNAL DIMENSIONS
(F004-2 empennage installed)

6-40 External Dimensions (continued)



R66
Turbine

EXTERNAL DIMENSIONS

FIGURE 6-1A EXTERNAL DIMENSIONS
(C004-2 empennage installed)

6-50 Baggage Compartment Dimensions

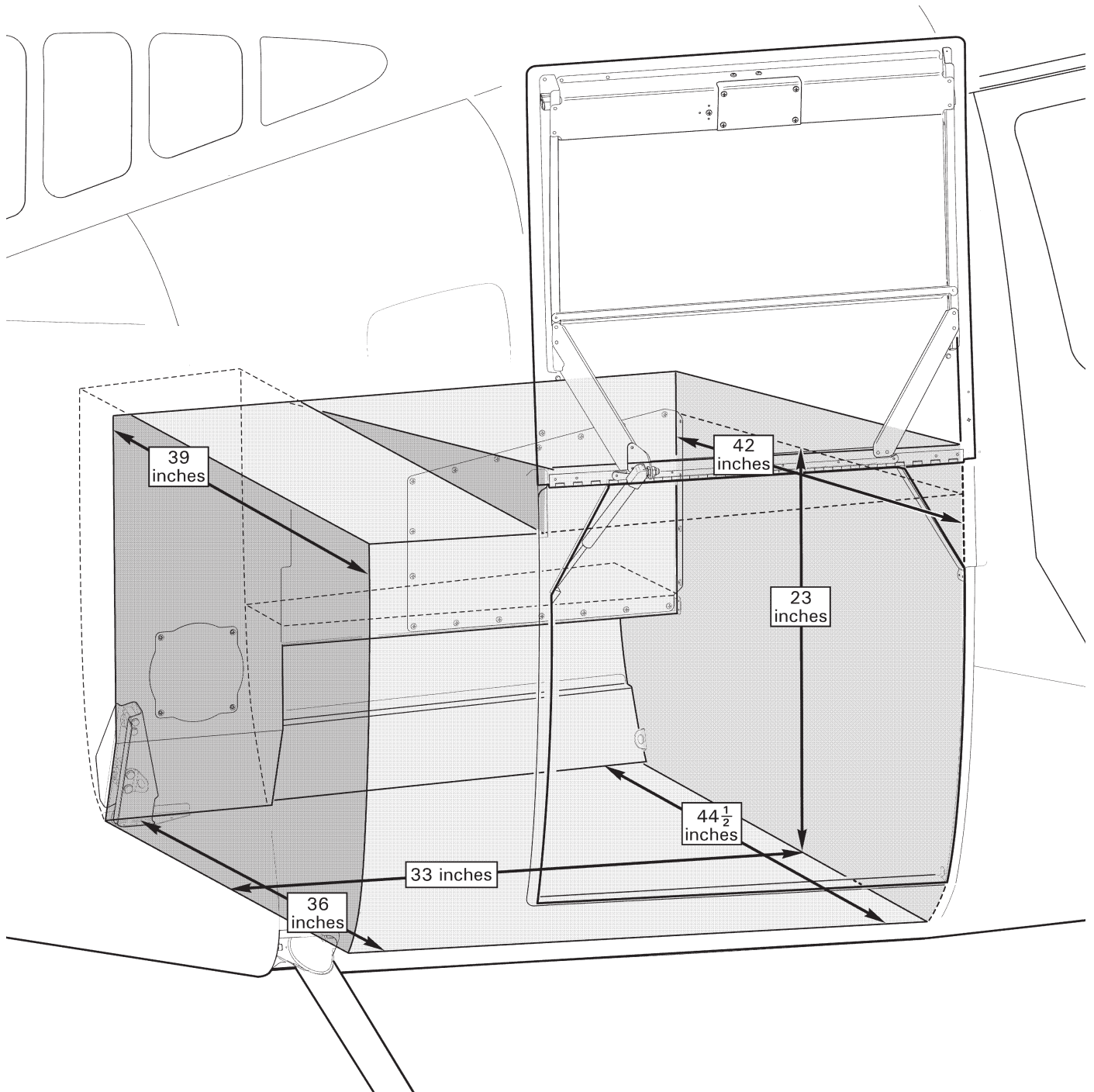


FIGURE 6-2 BAGGAGE COMPARTMENT INTERIOR DIMENSIONS
(Dimensions given are approximate)

6-50 Baggage Compartment Dimensions (continued)

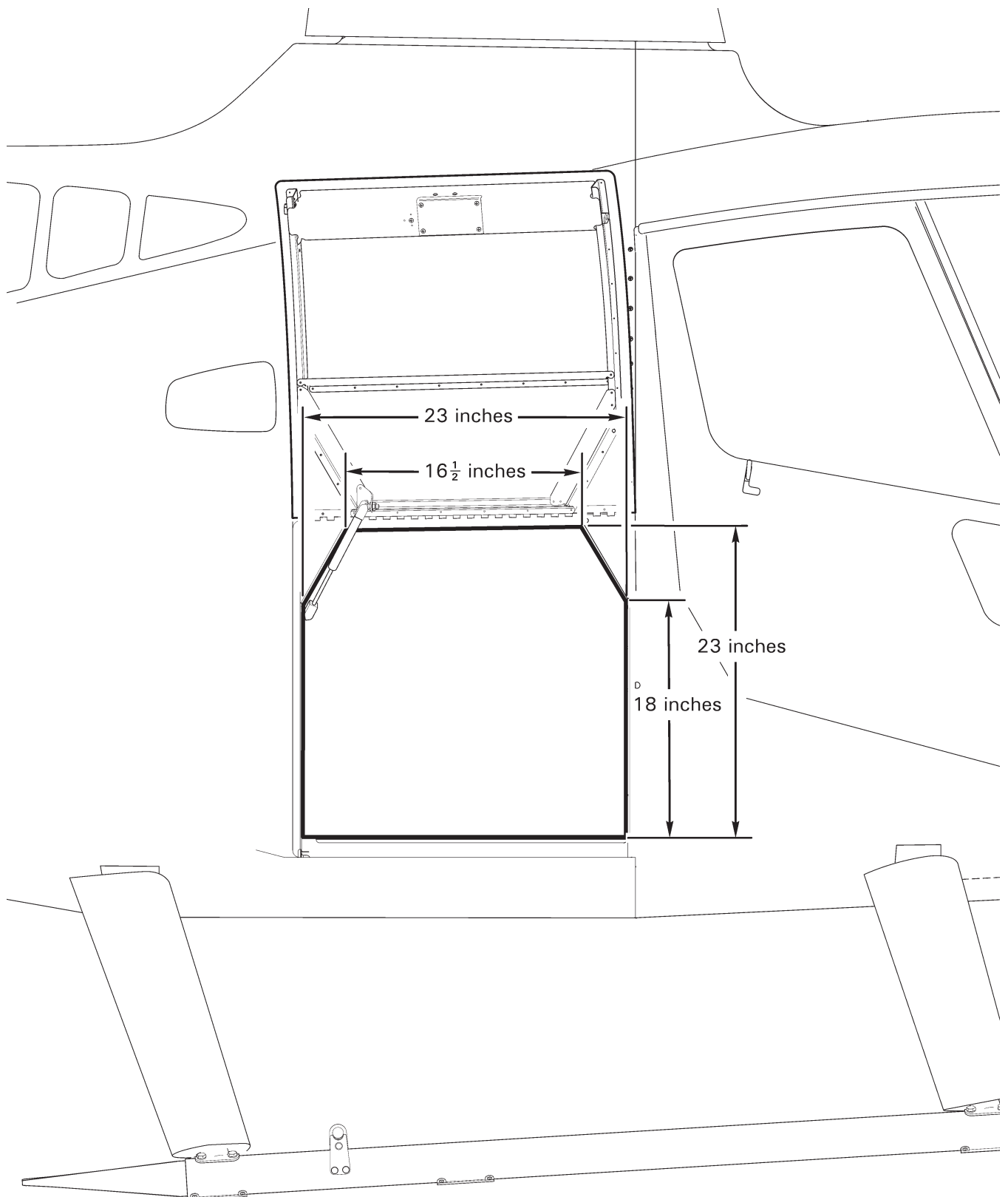


FIGURE 6-3 BAGGAGE COMPARTMENT ACCESS DIMENSIONS
(Dimensions given are approximate)

6-60 Station Diagrams

6-61 Fuselage Station (FS) Locations

1	Datum	FS 0.00
2	Nose Bracket (tie-down)	FS 2.36
3	Ground Handling Ball (center point, bottom).	FS 32.67
4	Seat Box Assembly - Forward (front wall)	FS 39.50
5	Seat Box Assembly - Aft (front wall)	FS 69.30
6	Cross Tube - Forward (centerline, at strut)	FS 71.56
7	Baggage Compartment (forward wall)	FS 92.00
8	Main Rotor Drive Shaft (centerline)	FS 100.00
9	Fuel Cell - Structure (aft wall)	FS 115.00
10	Engine Firewall - Vertical	FS 125.00
11	Cross Tube - Aft (centerline, at strut)	FS 127.35
12	Skid Extension (aft edge)	FS 134.78
13	Engine Cowling (aft point)	FS 171.45

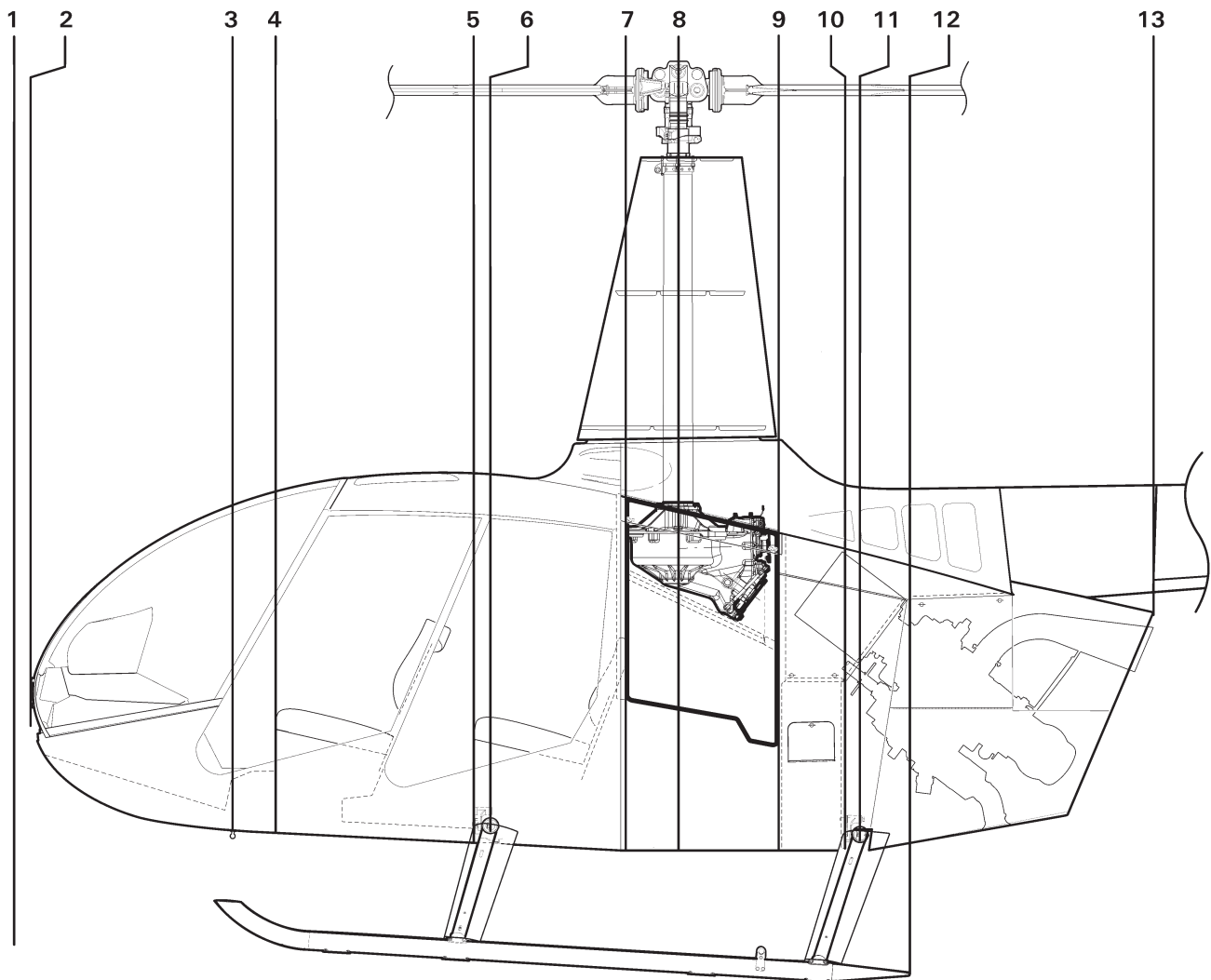


FIGURE 6-4 FUSELAGE STATION LOCATIONS

6-62 Tailcone Station (TS) Locations

NOTE

Typical angle between tailcone station lines & skin aft edges is 4°30' from longitudinal centerline. Forward edge of CO23-6 skin & aft edge of CO23-12 skin are (true) tailcone station lines.

1	Forward Edge CO23-6 Skin	TS 0.00
2	Aft Edge CO23-6 Skin & Tailcone Centerline Intersection	TS 25.00
3	Aft Edge CO23-7 Skin & Tailcone Centerline Intersection	TS 51.00
4	Aft Edge CO23-8 Skin & Tailcone Centerline Intersection	TS 74.00
5	Aft Edge CO23-9 Skin & Tailcone Centerline Intersection	TS 98.00
6	Aft Edge CO23-10 Skin & Tailcone Centerline Intersection	TS 122.00
7	Aft Edge CO23-11 Skin & Tailcone Centerline Intersection	TS 146.00
8	Aft Edge CO23-12 Skin	TS 177.30
9*	Tail Rotor Gearbox (centerline)	FS 327.00

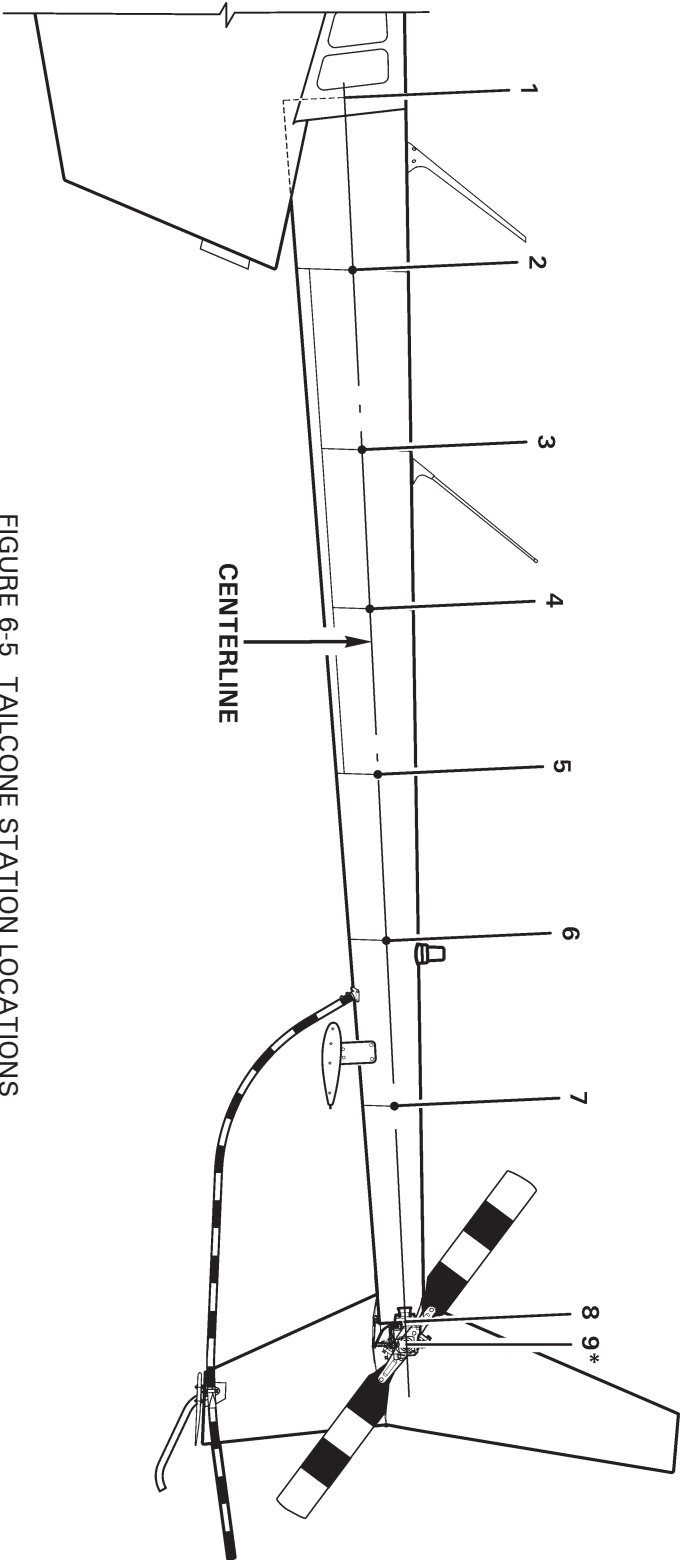


FIGURE 6-5 TAILCONE STATION LOCATIONS

6-63 Water Line (WL) Station Locations

1	Teeter Hinge Bolt (main rotor)	WL 138.00
2	Upper Rib (top)	WL 125.17
3	Middle Rib (top)	WL 104.88
4	Lower Rib (top)	WL 84.59
5*	Tail Rotor Gearbox (centerline)	WL 75.50
6	Main Rotor Gearbox (tail rotor and main rotor drive shaft intersection point)	WL 66.00
7	Baggage Compartment (ceiling, lowest point)	WL 45.60
8	Baggage Compartment (floor)	WL 22.59
9	Belly	WL 20.78
10	Landing Gear	WL 0.79
11	Origin	WL 0.00

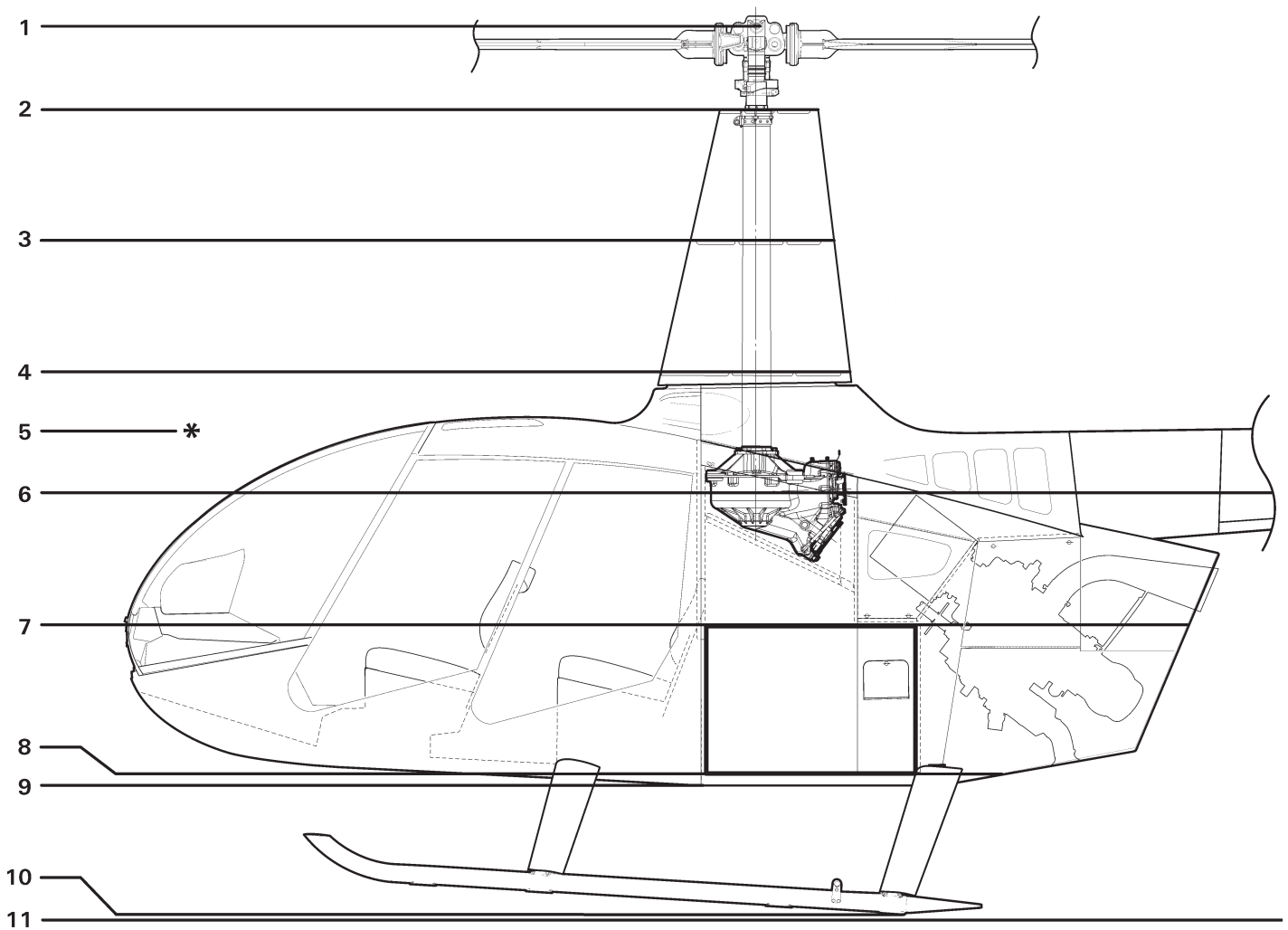


FIGURE 6-6 WATER LINE STATION LOCATIONS

6-64 Butt Line (BL) Station Locations

1	Skid Tube (centerline)	BL 42.00
2	F050-2 Horizontal Stabilizer (outboard point)	BL 33.00
3	Door Post (between forward & aft doors)	BL 28.25
4	Jack Lug/Tab (aft strut assembly)	BL 16.73
5	Ground Handling Ball (jack point)	BL 4.13
6	Origin	BL 0.00
7	Teeter Hinge Bolt (tail rotor)	LBL 11.01
8	Jack Tab (aft strut assembly)	LBL 16.73
9	C044 Horizontal Stabilizer (outboard point)	BL 46.75

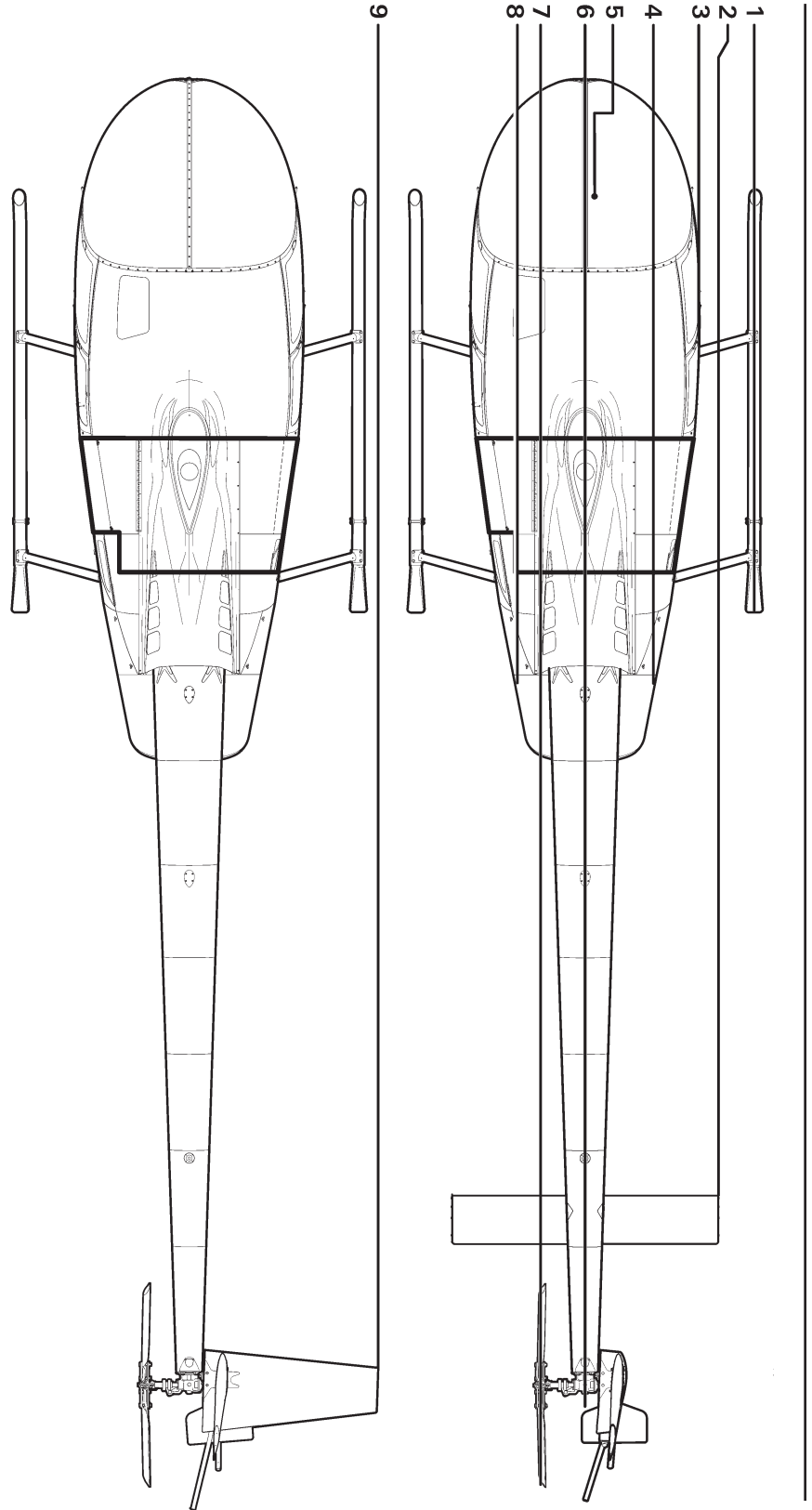


FIGURE 6-7 BUTT LINE STATION LOCATIONS

6-70 Access and Inspection Panels

Refer to R66 Illustrated Parts Catalog Chapter 6 for access and inspection panel locations.

6-71 B526 Screws and B527-08 Washers

B526 (TORX Plus®) truss head screws may be used to secure cowlings and access panels. A B527-08 nylon washer may be used under a B526 screw head to further protect thin or painted surfaces.

Following B526 screws are interchangeable with MS27039C080_ screws used to secure cowlings and access panels:

<u>PART:</u>	<u>INTERCHANGEABLE WITH:</u>
MS27039C0806 screw	B526-6 screw
MS27039C0807 screw	B526-8 screw
MS27039C0808 screw	B526-8 screw

Following B526 screws are interchangeable with AN525-832R_ & AN526C832R_ screws:

<u>PART:</u>	<u>INTERCHANGEABLE WITH:</u>
AN525-832R6 or AN526C832R6 screw	B526-6 screw
AN525-832R7 or AN526C832R7 screw	B526-8 screw
AN525-832R8 or AN526C832R8 screw	B526-8 screw

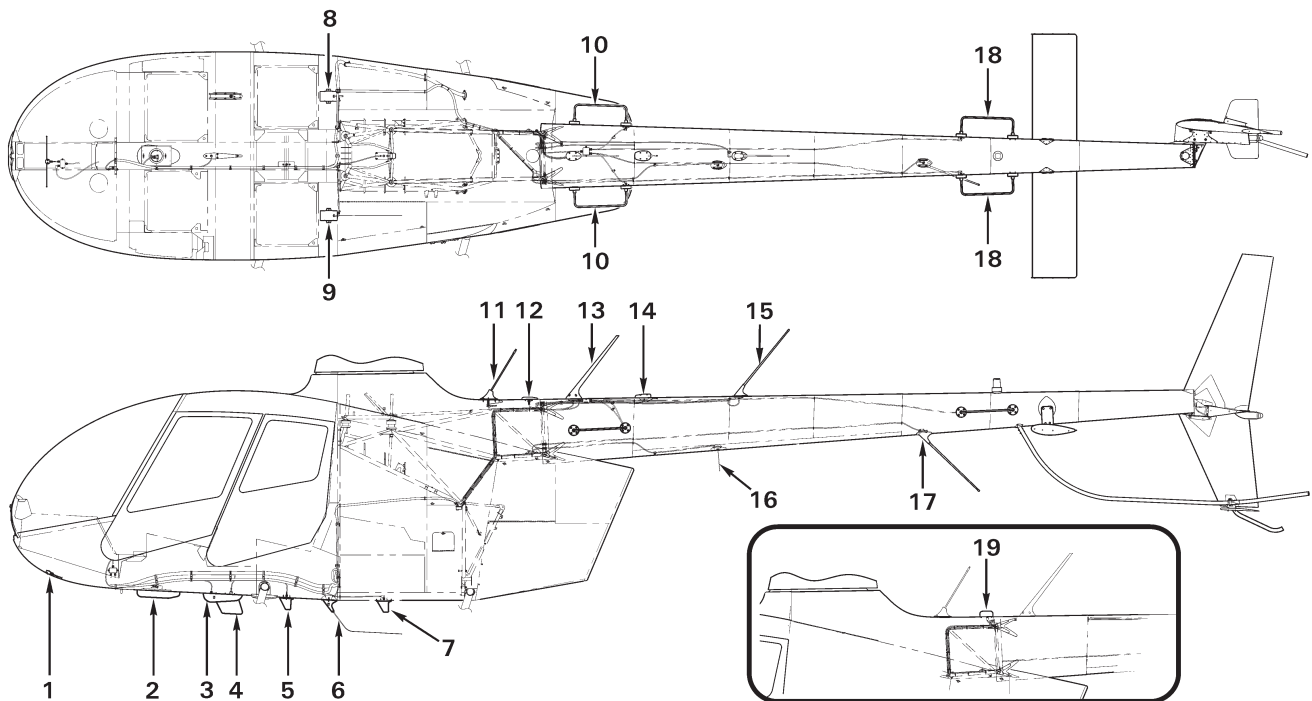
B526-66 screws (used to secure F952-3 plates to F050-2 stabilizer) are not interchangeable with other screws.

NOTE
B526 screws are compatible with T20 or 20IP drivers.

6-80 Antenna Locations

ITEM	ANTENNA	MHz	PART NO.	ITEM	ANTENNA	MHz	PART NO.
1	Glidescope	—	CI 193	13	Upper Fwd COM	—	CI 121, CI 248-5
2	ADF	—	KA44B		Upper Fwd FM	—	CI 177
3	Marker Beacon	—	CI 102		Upper Fwd FM	403-512	CI 273, CI 272-1, CI 271
4	RH Belly UHF	400-960	CI 285			800-870	CI 306
5	DME	—	CI 105-16, KA60		Upper Fwd COM/GPS	—	CI 2580-200
	Transponder	—	CI 105-16, KA60		Upper Fwd GPS	—	GA 35
	ADS-B	—	CI 105-16, KA60	14	Upper Mid RSM/GPS	—	921-00003-001
6	LH/RH Belly (Ref)	—	See items 8 and 9		Upper Mid GPS	—	GA 35
7	Transponder	—	CI 105-16, KA60	15	Upper Aft COM	—	CI 121, CI 248-5
8	RH Belly FM	138-174	CI 292-3, DM C63-3/A		Upper Aft FM	—	CI 177
		450-470	CI 177-20		Upper Aft FM	403-512	CI 273, CI 272-1, CI 271
	RH Belly AM/FM	—	CI 222		Upper Aft COM/GPS	—	CI 2580-200
	RH Belly FM	403-512	CI 273, CI 272-1, CI 271	16	Lower Fwd FM	—	CI 177
9	LH Belly FM	138-174	CI 292-3, DM C63-3/A			800-870	CI 306
		450-470	CI 177-20		Lower Fwd FM	403-512	CI 273, CI 272-1, CI 271
		220-225	D721-1	17	Lower Aft FM	—	CI 177
	LH Belly FM	403-512	CI 273, CI 272-1, CI 271		Lower Aft VHF	118-136	CI 122
	LH Belly COM	118-136	CI 122		Lower Aft FM	403-512	CI 273, CI 272-1, CI 271
10	NAV	108-118 & 329-335	D20543 (VOR & LOCALIZER)			800-870	CI 306
		108-118 & 329-335	D20543 (VOR & LOCALIZER W/DIPLEXER)	18	NAV	108-118 & 329-335	D20543 (VOR & LOCALIZER)
						108-118 & 329-335	D20543 (VOR & LOCALIZER W/DIPLEXER)
11	ELT	—	AV-300	19	Cowling GPS*	—	GA 35
12	Cowling GPS	—	GA 35				
	Cowling XM	—	GA 55				

* Earlier aircraft.



F850 REV K

FIGURE 6-10 ANTENNA LOCATIONS

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