SECTION 1

GENERAL DESCRIPTION

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1-1. GENERAL DESCRIPTION.

1-2. MODEL 150 AND F150-SERIES.

1-3. DESCRIPTION. Cessna Model 150 and F150-Series aircraft, described in this manual, are high-wing monoplanes of all-metal, semimonocoque construction. Thes aircraft are equipped with fixed tubular spring-steel main gear struts and a steerable nose gear. The steerable nose gear is equipped with an air/hydraulic fluid shock strut. Two-place seating is standard, and a double-width, fold-up auxiliary rear seat may be installed as optional equipment. Each Model 150 and F150-Series aircraft is equipped with a four-cylinder, horizontally opposed, air-cooled Continental or Rolls Royce engine, driving an all-metal, fixed-pitch propeller. These aircraft feature a "wrap around" rear window and a swept-back fin and rudder.

1-4. MODEL A150 and FA150-SERIES.

1-5. DESCRIPTION. Aerobatic Model A150 and FA150-Series aircraft are a modification of the currently produced Model 150. Structure has been "beefed-up" in some areas in order to meet requirements of the Acrobatic Category, FAR Part 23. In addition to the "beef-up", quick-release cabin doors, two-strap shoulder harnesses, and aerobatic paint design are standard. Removable seat and back cushions are provided to allow occupants to use either a seat-pack or back-pack type parachute during aerobatic maneuvers.

1-6. AIRCRAFT SPECIFICATIONS. Leading particulars of these aircraft, with dimensions based on gross weight, are given in figure 1-1. If these dimensions are used for constructing a hangar or computing clearances, remember that such factors as nose gear strut inflation, tire pressures, tire sizes and load distribution may result in some dimensions that are considerably different from those listed.

1-7. STATIONS. Station diagrams are shown in figures 1-2 and 1-3 to assist in locating equipment when a written description is inadequate or impractical.

1-8. TORQUE VALUES. A chart of recommended nut torque values is shown in figure 1-4. These torque values are recommended for all installation procedures contained in this manual, except where other values are stipulated. They are not to be used for checking tightness of installed parts during service.

GROSS WEIGHT	1600 lb
FUEL CAPACITY	
Standard Wing (Total)	26 gal.
Standard Wing (Usable)	22.5 gal.
Long-Range Wing (Total)	38 gal.
Long-Range Wing (Usable)	35 gal.
OIL CAPACITY	
Without External Filter	6 qt
With External Filter	7 qt
ENGINE MODEL (Refer to Section 11 for Engine Data)	CONTINENTAL O-200 Series
PROPELLER (Fixed Pitch)	69" McCAULEY
MAIN WHEEL TIRES	6.00 x 6, 4-Ply Rating
Pressure	21 psi
NOSE WHEEL TIRE (Standard)	5.00 x 5, 4-Ply Rating
Pressure	30 psi
NOSE GEAR STRUT PRESSURE (Strut Extended)	20 psi
WHEEL ALIGNMENT (Tubular Gear)	
Camber	3° to 5°
Toe-In	.00" to +.16"
AILERON TRAVEL	
Up	20°, +2° -0°
Down	14°, +2° -0°
WING FLAP TRAVEL	0° to 40° ±2°
RUDDER TRAVEL (Measured parallel to water line)	
Right	20° 30', +0° -2°
Left	20° 30', +0° -2°
RUDDER TRAVEL (Measured perpendicular to hinge line)	
Right	23°, +0° -2°
Left	23°, +0° -2°
ELEVATOR TRAVEL	
Up	23°, +1° -0°
Down	15° ±1°
ELEVATOR TRIM TAB TRAVEL	
Up	10° ±1°
Down	20° ±1°
PRINCIPAL DIMENSIONS	
Wing Span	33' 4"
Length	23' 11-1/2"
Fin Height (Maximum with Nose Gear Depressed and Flashing Beacon Installed on Fin)	8' 6"
Track Width	7' 7-1/4"
Tail Span	10' 0"
BATTERY LOCATION	Firewall

Figure 1-1. Aircraft Specifications

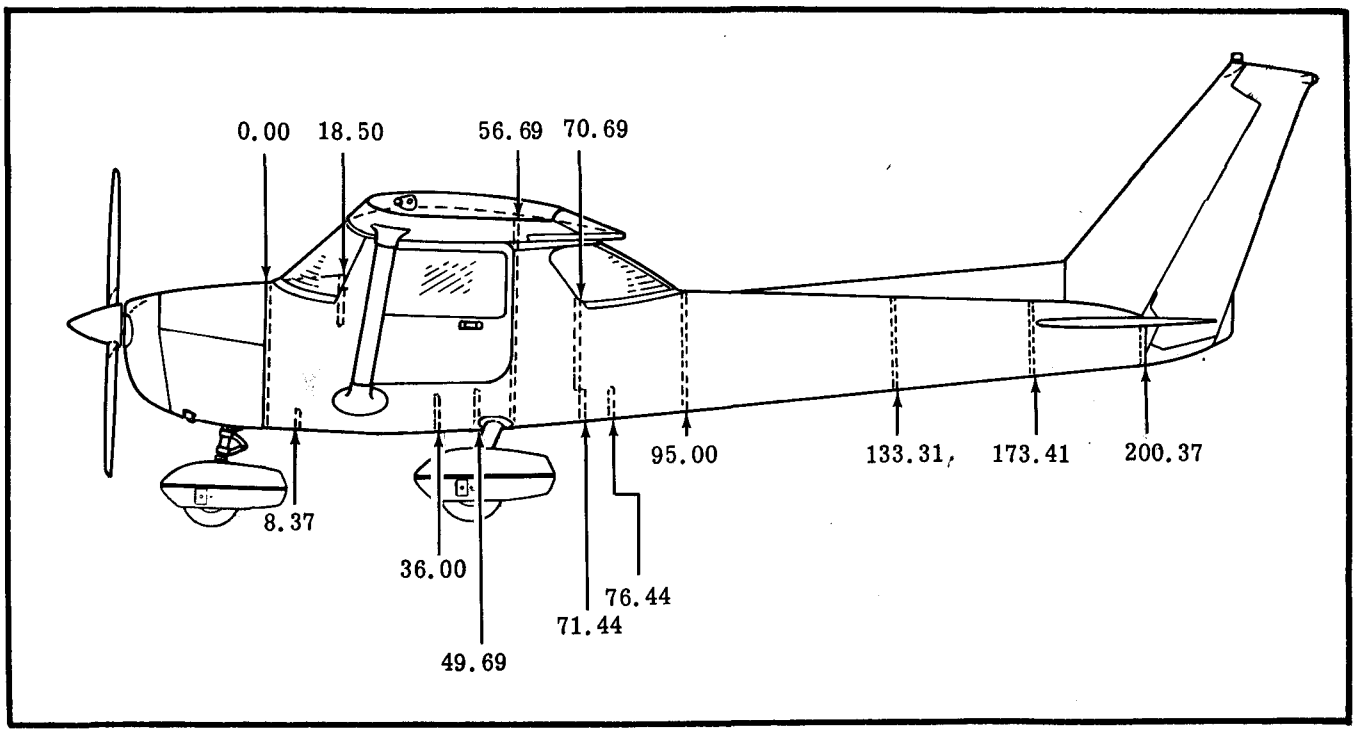

Figure 1-2. Fuselage Stations

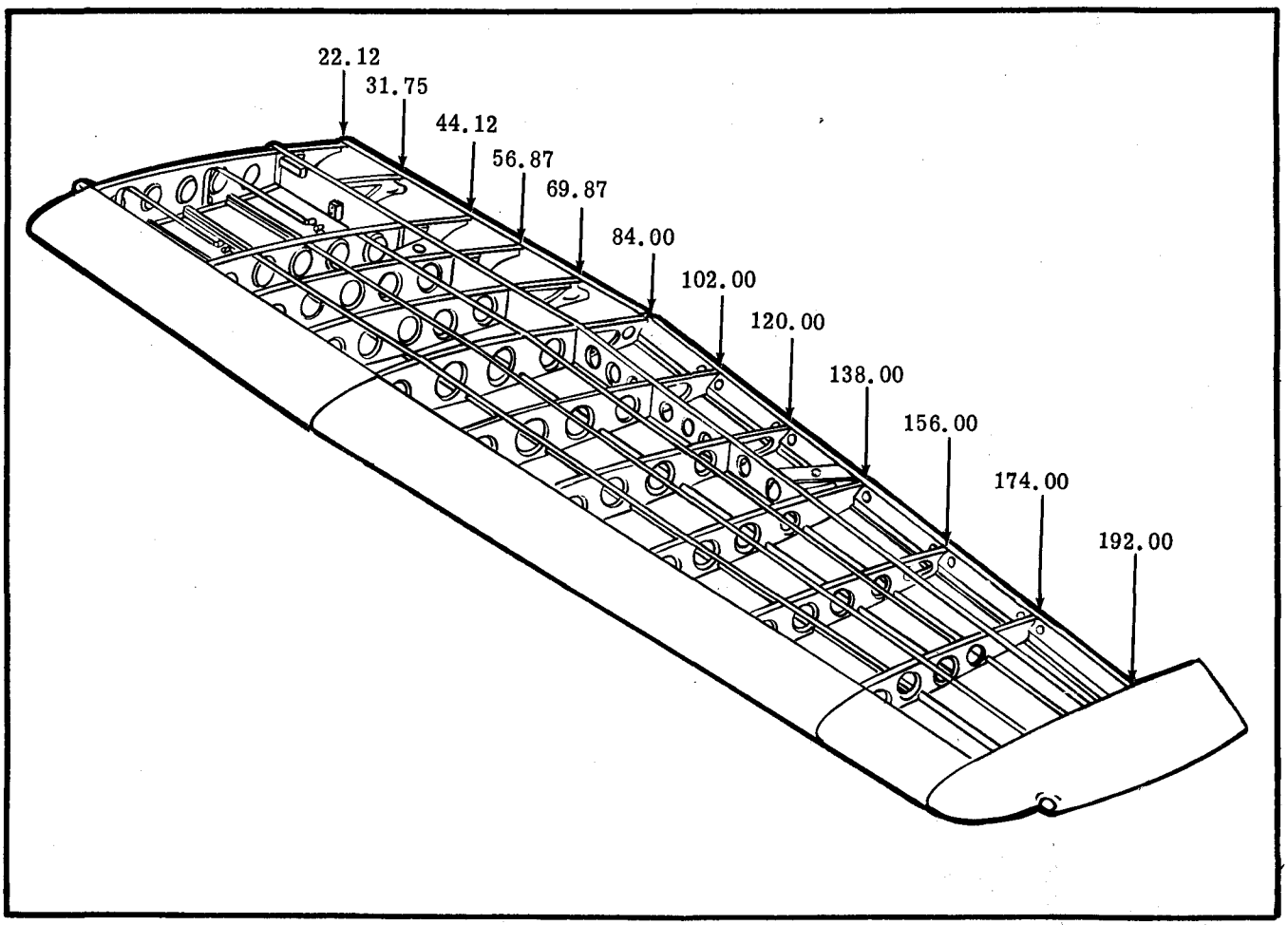

Figure 1-3. Wing Stations

RECOMMENDED NUT TORQUES

THE TORQUE VALUES STATED ARE POUND-INCHES, RELATED ONLY TO STEEL NUTS ON OIL-FREE CADMIUM PLATED THREADS.

TAP SIZE	TENSION TORQUE		SHEAR TORQUE	
	STD (NOTE 1)	ALT (NOTE 2)	STD (NOTE 3)	ALT (NOTE 2)
FINE THREAD SERIES				
8-36	12-15		7-9	
10-32	20-25	20-28	12-15	12-19
1/4-28	50-70	50-75	30-40	30-48
5/16-24	100-140	100-150	60-85	60-106
3/8-24	160-190	160-260	95-110	95-170
7/16-20	450-500	450-560	270-300	270-390
1/2-20	480-690	480-730	290-410	290-500
9/16-18	800-1000	800-1070	480-600	480-750
5/8-18	1100-1300	1100-1600	660-780	660-1060
3/4-16	2300-2500	2300-3350	1300-1500	1300-2200
7/8-14	2500-3000	2500-4650	1500-1800	1500-2900
1-14	3700-5500	3700-6650	2200-3300	2200-4400
1-1/8-12	5000-7000	5000-10000	3000-4200	3000-6300
1-1/4-12	9000-11000	9000-16700	5400-6600	5400-10000
COARSE THREAD SERIES				
	(NOTE 4)		(NOTE 5)	
8-32	12-15		7-9	
10-24	20-25		12-15	
1/4-20	40-50		25-30	
5/16-18	80-90		48-55	
3/8-16	160-185		95-100	
7/16-14	235-255		140-155	
1/2-13	400-480		240-290	
9/16-12	500-700		300-420	
5/8-11	700-900		420-540	
3/4-10	1150-1600		700-950	
7/8-9	2200-3000		1300-1800	
1-8	3700-5000		2200-3000	
1-1/8-8	5500-6500		3300-4000	
1-1/4-8	6500-8000		4000-5000	

NOTES

1. Covers AN310, AN315, AN345, AN363, MS20365, MS21042, MS21044, MS21045 and MS21046.
2. When using AN310 or AN320 castellated nuts where alignment between the bolt and cotter pin slots is not reached using normal torque values, use alternate torque values or replace the nut.
3. Covers AN316, AN320, MS20364 and MS21245.
4. Covers AN363, MS20365, MS21042, MS21043, MS21044, MS21045 and MS21046.
5. Covers AN340.

CAUTION

DO NOT REUSE SELF-LOCKING NUTS.

The above values are recommended for all installation procedures contained in this manual, except where other values are stipulated. They are not to be used for checking tightness of installed parts during service.

Figure 1-4. Torque Values