

SECTION 1

GENERAL DESCRIPTION

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1-1. GENERAL DESCRIPTION.

1-2. MODEL 337-SERIES.

1-3. DESCRIPTION. Cessna Model 337-Series aircraft, described in this manual, are twin-engine, high-wing monoplanes of all-metal, semimonocoque construction. The aircraft employs a fully-retractable tricycle landing gear with spring-steel main gear struts. The steerable nose gear is an air/oil filled oleo strut. Thru 1971, the landing gear is hydraulically-actuated. Beginning with 1972 models, the landing gear is electrically-actuated. The wing flaps are electrically actuated, and flight adjustable trim is provided for the rudder and elevator systems. Four-place seating is standard, but provisions are made for the addition of optional seats. The engines are placed in tandem on the fuselage centerline and the empennage is mounted on twin tail booms. The aircraft is powered by two six-cylinder, horizontally-opposed, air-cooled, fuel-injected Continental engines. Each engine turns an all-metal, constant-

speed, full-feathering propeller. In addition, the Model T337-Series aircraft engines are turbocharged.

1-4. AIRCRAFT SPECIFICATIONS. Leading particulars of these aircraft, with dimensions based on gross weight, are listed in figure 1-1. If these dimensions are to be used for constructing a hangar or computing clearances, remember that such factors as tire pressures, tire sizes and load distribution may result in some dimensions that are considerably different from those listed.

1-5. STATIONS. A station diagram is included in figure 1-2 to assist in locating equipment when a written description is inadequate or impractical.

1-6. TORQUE VALUES. A chart of recommended nut torques is provided in figure 1-3. These 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.

MODEL 337 AND T337 SERIES

DESIGN GROSS WEIGHT	
(Thru 337A)	4200 lbs
(337B and T337B)	4400 lbs
(337C)	4500 lbs
(T337C)	
Take Off	4500 lbs
Landing	4400 lbs
(337D)	4500 lbs
(T337D)	
Take Off	4500 lbs
Landing	4400 lbs
(337E and On)	4630 lbs
(T337E and On)	
Take Off	4630 lbs
Landing	4400 lbs
FUEL CAPACITY (Total-Less Auxiliary Tanks)	93 gal. (558 lbs)*
Usable	92 gal. (552 lbs)*
(Total-Including Auxiliary Tanks)	(Thru 337F) 131 gal. (786 lbs)*
Usable	(Thru 337F) 128 gal. (768 lbs)*
(Total)	(337G) 125 gal. (750 lbs)*
Usable	(337G) 118 gal. (708 lbs)*
OIL CAPACITY (Total-Both Engines)	20 qt
(With External Oil Filter and all Turbocharged Engines)	22 qt
ENGINE MODEL	
(337)	CONTINENTAL IO-360 Series
(T337)	CONTINENTAL TSIO-360 Series
PROPELLER (Constant-Speed, Full-Feathering, Both Engines)	76" McCAULEY (Thru 337F)
PROPELLER (Constant-Speed, Full-Feathering, Forward Engine)	78" McCAULEY (337G)
PROPELLER (Constant-Speed, Full-Feathering, Rear Engine)	76" McCAULEY (337G)
MAIN WHEEL TIRES	
Size (Standard)	6.00 x 6, 8-Ply Rating
Pressure	55 psi **
Size (Optional: Beginning with 337E-Series)	18 x 5.5, 8-Ply Rating
Pressure	64 psi** 70 psi
NOSE WHEEL TIRE	(Thru 337F) (337G)
Size	15.0 x 6.00 x 6, 4-Ply Rating
Pressure	42 psi **
NOSE GEAR STRUT PRESSURE (Strut Extended)	35 psi
WHEEL ALIGNMENT	
Camber	4° ± 1° 30'
Toe-In (Total-Both Wheels)	0 to .06"
AILERON TRAVEL	
Up	21° ± 2°
Down	14° 30' ± 2°
WING FLAP TRAVEL	
Inboard Flaps	0° to 25°, + 1° -2°
Outboard Flaps	0° to 25°, + 1° -2°
RUDDER TRAVEL (Perpendicular to Rudder Hinge Centerline)	
Outboard	25° ± 2°
Inboard	17°, + 0° -2°
RUDDER TRAVEL (Parallel to Fin Water Line)	
Outboard	22° ± 2°
Inboard	15°, + 0° -2°

* FIGURED AT 6 POUNDS PER GALLON.

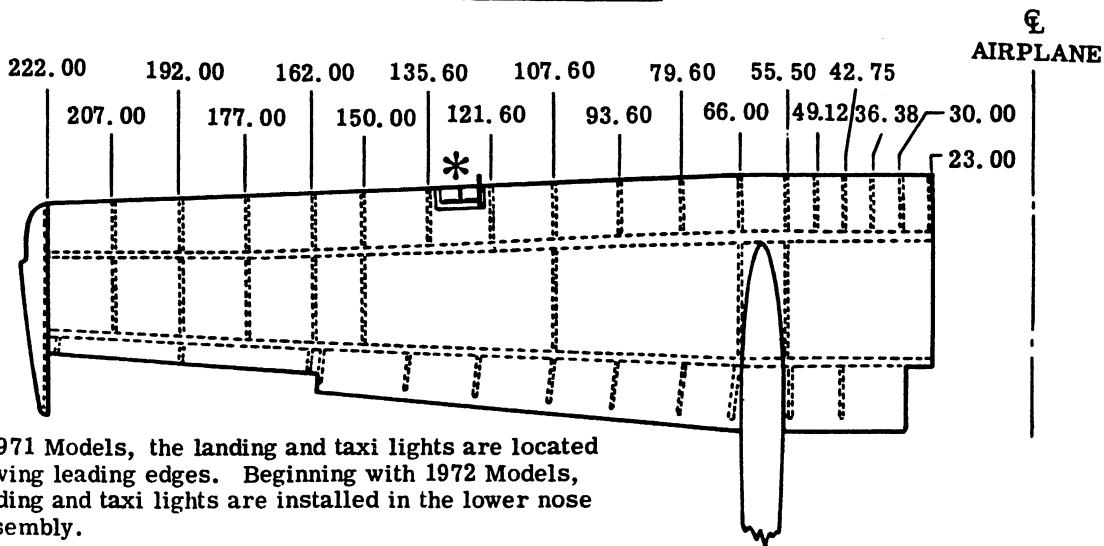
**AT TIRE INSTALLATION, TO AVOID TIRE SLIPPAGE AND TO SET TIRE BEAD ON RIM, OVERPRESSURE NOSE WHEEL TIRE TO 55 PSI, AND THEN REDUCE TIRE PRESSURE TO 42 PSI. OVERPRESSURE STANDARD (6.00 x 6) MAIN WHEEL TIRES TO 70 PSI, AND THEN REDUCE TIRE PRESSURE TO 55 PSI. OVERPRESSURE OPTIONAL (18 x 5.5) MAIN WHEEL TIRES TO 80 PSI, AND THEN REDUCE TIRE PRESSURE TO 64 PSI.

Figure 1-1. Aircraft Specifications (Sheet 1 of 2)

ELEVATOR TRAVEL	
Up (Thru 337C)	21° ± 30'
Up (337D and On)	26° ± 1°
Down (Thru 337C)	15° ± 2°
Down (337D and On)	15° ± 1°
ELEVATOR TRIM TAB TRAVEL	
Up (Thru 337B)	15° ± 1°
Up (337C)	20° ± 1°
Up (337D and On)	15° ± 1°
Down, with Flaps Up (337)	15° ± 1°
Down, with Flaps Up (337A thru 337C)	10° ± 1°
Down, with Flaps Up (337D and On)	0° ± 1°
Down, with 2/3 Flaps (337 thru 337C)	26°, + 1° -2°
Down, with Full Flaps (337D and On)	15° ± 1°
PRINCIPAL DIMENSIONS	
Wing Span	
(337 thru 337D)	38'
(337E and On)	38' 2"
(337E and On with Strobe Lights)	38' 4"
Tail Span (Overall)	10' 8-1/4"
Length	
(337-Series)	29' 9"
(T337-Series)	29' 10"
Fin Height (Maximum with Nose Gear Depressed)	9' 4"
Track Width	8' 2"
BATTERY LOCATION	Left side of front firewall

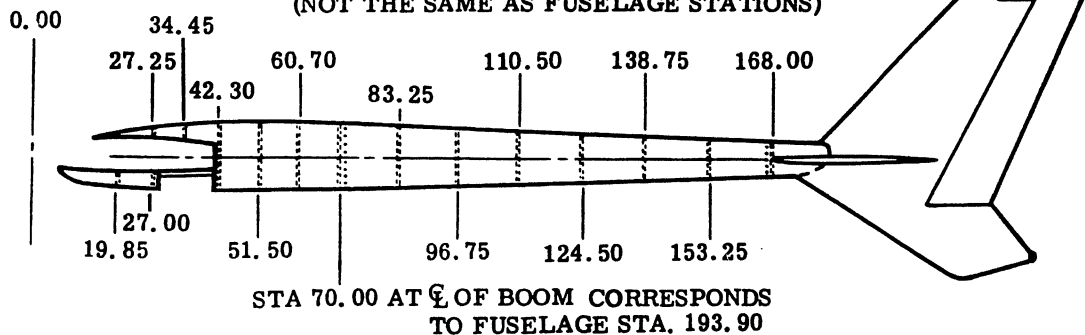
Figure 1-1. Aircraft Specifications (Sheet 2 of 2)

WING STATIONS

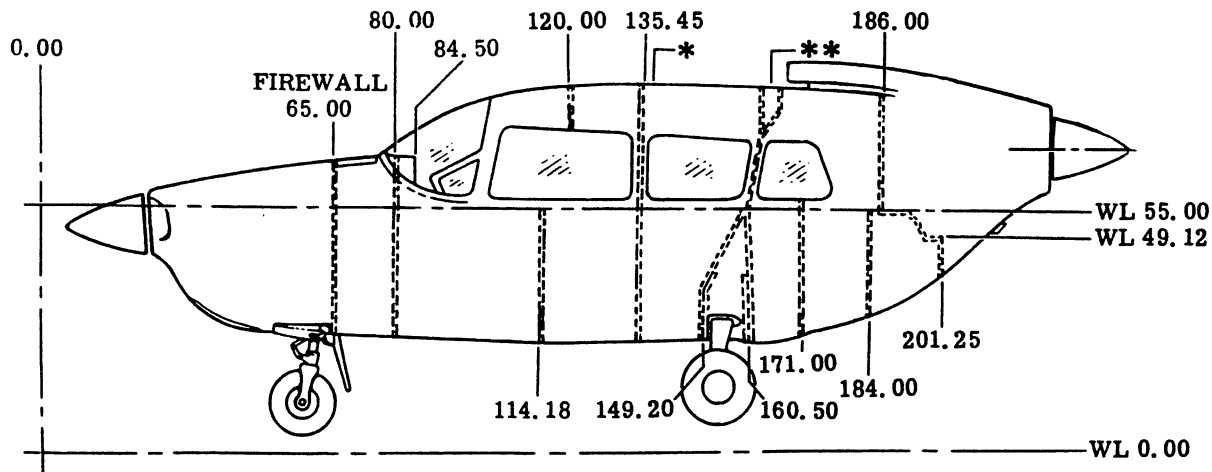


* Thru 1971 Models, the landing and taxi lights are located in the wing leading edges. Beginning with 1972 Models, the landing and taxi lights are installed in the lower nose cap assembly.

**BOOM STATIONS
(NOT THE SAME AS FUSELAGE STATIONS)**



FUSELAGE STATIONS



* ϕ FRONT SPAR AT ϕ WING BOLT HOLE IS STA. 136.44

** ϕ REAR SPAR AT ϕ WING BOLT HOLE IS STA. 165.09

Figure 1-2. Fuselage, Wing and Boom Stations

RECOMMENDED NUT TORQUES

NOTE

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

FINE THREAD SERIES

TAP SIZE	TYPE OF NUT			
	TENSION		SHEAR	
	TORQUE		TORQUE	
	STD (NOTE 1)	ALT (NOTE 2)	STD (NOTE 3)	ALT (NOTE 2)
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, AN362, AN363, AN366, MS20365, "1452", "EB", "UWN", "Z1200", NAS679, MS21044, MS21042, MS21045 and other self-locking nuts.
2. When using AN310 or AN320 castellated nuts where alignment between bolt and cotter pin is not reached using normal torque values, use alternate torque values or replace nut.
3. Covers AN316, AN320, AN7502 and MS20364.
4. Covers AN310, AN340, AN366, MS20365, and other self-locking anchor nuts.
5. Covers AN316, AN320 and MS20364.

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

Figure 1-3. Torque Values